



# Sequence Listing

<110> Ashkenazi, Avi  
Baker Kevin P.  
Botstein, David  
Desnoyers, Luc  
Eaton, Dan  
Ferrara, Napoleon  
Filvaroff, Ellen  
Fong, Sherman  
Gao, Wei-Qiang  
Gerber, Hanspeter  
Gerritsen, Mary E.  
Goddard, Audrey  
Godowski, Paul J.  
Grimaldi, J. Christopher  
Gurney, Austin L.  
Hillan, Kenneth J  
Kljavin, Ivar J.  
Kuo, Sophia S.  
Napier, Mary A.  
Pan, James;  
Paoni, Nicholas F.  
Roy, Margaret Ann  
Shelton, David L.  
Stewart, Timothy A.  
Tumas, Daniel  
Williams, P. Mickey  
Wood, William I.

<120> Secreted and Transmembrane Polypeptides and Nucleic  
Acids Encoding the Same

<130> P2630P1C3

<140> 09/978299

<141> 2001-10-15

<150> 09/918585

<151> 2001-07-30

<150> 60/062250

<151> 1997-10-17

<150> 60/064249

<151> 1997-11-03

<150> 60/065311

<151> 1997-11-13

<150> 60/066364

<151> 1997-11-21

<150> 60/077450

<151> 1998-03-10

<150> 60/077632

<151> 1998-03-11

<150> 60/077641  
<151> 1998-03-11

<150> 60/077649  
<151> 1998-03-11

<150> 60/077791  
<151> 1998-03-12

<150> 60/078004  
<151> 1998-03-13

<150> 60/078886  
<151> 1998-03-20

<150> 60/078936  
<151> 1998-03-20

<150> 60/078910  
<151> 1998-03-20

<150> 60/078939  
<151> 1998-03-20

<150> 60/079294  
<151> 1998-03-25

<150> 60/079656  
<151> 1998-03-26

<150> 60/079664  
<151> 1998-03-27

<150> 60/079689  
<151> 1998-03-27

<150> 60/079663  
<151> 1998-03-27

<150> 60/079728  
<151> 1998-03-27

<150> 60/079786  
<151> 1998-03-27

<150> 60/079920  
<151> 1998-03-30

<150> 60/079923  
<151> 1998-03-30

<150> 60/080105  
<151> 1998-03-31

<150> 60/080107

<151> 1998-03-31

<150> 60/080165

<151> 1998-03-31

<150> 60/080194

<151> 1998-03-31

<150> 60/080327

<151> 1998-04-01

<150> 60/080328

<151> 1998-04-01

<150> 60/080333

<151> 1998-04-01

<150> 60/080334

<151> 1998-04-01

<150> 60/081070

<151> 1998-04-08

<150> 60/081049

<151> 1998-04-08

<150> 60/081071

<151> 1998-04-08

<150> 60/081195

<151> 1998-04-08

<150> 60/081203

<151> 1998-04-09

<150> 60/081229

<151> 1998-04-09

<150> 60/081955

<151> 1998-04-15

<150> 60/081817

<151> 1998-04-15

<150> 60/081819

<151> 1998-04-15

<150> 60/081952

<151> 1998-04-15

<150> 60/081838

<151> 1998-04-15

<150> 60/082568

<151> 1998-04-21

<150> 60/082569

<151> 1998-04-21

<150> 60/082704

<151> 1998-04-22

<150> 60/082804

<151> 1998-04-22

<150> 60/082700

<151> 1998-04-22

<150> 60/082797

<151> 1998-04-22

<150> 60/082796

<151> 1998-04-23

<150> 60/083336

<151> 1998-04-27

<150> 60/083322

<151> 1998-04-28

<150> 60/083392

<151> 1998-04-29

<150> 60/083495

<151> 1998-04-29

<150> 60/083496

<151> 1998-04-29

<150> 60/083499

<151> 1998-04-29

<150> 60/083545

<151> 1998-04-29

<150> 60/083554

<151> 1998-04-29

<150> 60/083558

<151> 1998-04-29

<150> 60/083559

<151> 1998-04-29

<150> 60/083500

<151> 1998-04-29

<150> 60/083742

<151> 1998-04-30

<150> 60/084366

<151> 1998-05-05

<150> 60/084414



<151> 1998-05-06

<150> 60/084441

<151> 1998-05-06

<150> 60/084637

<151> 1998-05-07

<150> 60/084639

<151> 1998-05-07

<150> 60/084640

<151> 1998-05-07

<150> 60/084598

<151> 1998-05-07

<150> 60/084600

<151> 1998-05-07

<150> 60/084627

<151> 1998-05-07

<150> 60/084643

<151> 1998-05-07

<150> 60/085339

<151> 1998-05-13

<150> 60/085338

<151> 1998-05-13

<150> 60/085323

<151> 1998-05-13

<150> 60/085582

<151> 1998-05-15

<150> 60/085700

<151> 1998-05-15

<150> 60/085689

<151> 1998-05-15

<150> 60/085579

<151> 1998-05-15

<150> 60/085580

<151> 1998-05-15

<150> 60/085573

<151> 1998-05-15

<150> 60/085704

<151> 1998-05-15

<150> 60/085697

<151> 1998-05-15

<150> 60/086023

<151> 1998-05-18

<150> 60/086430

<151> 1998-05-22

<150> 60/086392

<151> 1998-05-22

<150> 60/086486

<151> 1998-05-22

<150> 60/086414

<151> 1998-05-22

<150> 60/087208

<151> 1998-05-28

<150> 60/087106

<151> 1998-05-28

<150> 60/087098

<151> 1998-05-28

<150> 60/091010

<151> 1998-06-26

<150> 60/090863

<151> 1998-06-26

<150> 60/091359

<151> 1998-07-01

<150> 60/094651

<151> 1998-07-30

<150> 60/100038

<151> 1998-09-11

<150> 60/109304

<151> 1998-11-20

<150> 60/113296

<151> 1998-12-22

<150> 60/113621

<151> 1998-12-23

<150> 60/123957

<151> 1999-03-12

<150> 60/126773

<151> 1999-03-29

<150> 60/130232

<151> 1999-04-21

<150> 60/131022

<151> 1999-04-26

<150> 60/131445

<151> 1999-04-28

<150> 60/134287

<151> 1999-05-14

<150> 60/139557

<151> 1999-06-16

<150> 60/141037

<151> 1999-06-23

<150> 60/142680

<151> 1999-07-07

<150> 60/145698

<151> 1999-07-26

<150> 60/146222

<151> 1999-07-28

<150> 60/162506

<151> 1999-10-29

<150> 09/040220

<151> 1998-03-17

<150> 09/105413

<151> 1998-06-26

<150> 09/168978

<151> 1998-10-07

<150> 09/184216

<151> 1998-11-02

<150> 09/187368

<151> 1998-11-06

<150> 09/202054

<151> 1998-12-07

<150> 09/218517

<151> 1998-12-22

<150> 09/254465

<151> 1999-03-05

<150> 09/265686

<151> 1999-03-10

<150> 09/267213

<151> 1999-03-12

<150> 09/284291

<151> 1999-04-12

<150> 09/311832

<151> 1999-05-14

<150> 09/380137

<151> 1999-08-25

<150> 09/380138

<151> 1999-08-25

<150> 09/380142

<151> 1999-08-25

<150> 09/709238

<151> 2000-11-08

<150> 09/723749

<151> 2000-11-27

<150> 09/747259

<151> 2000-12-20

<150> 09/816744

<151> 2001-03-22

<150> 09/816920

<151> 2001-03-22

<150> 09/854280

<151> 2001-05-10

<150> 09/854208

<151> 2001-05-10

<150> 09/872035

<151> 2001-06-01

<150> 09/874503

<151> 2001-06-05

<150> 09/882636

<151> 2001-06-14

<150> 09/886342

<151> 2001-06-19

<150> PCT/US98/21141

<151> 1998-10-07

<150> PCT/US98/24855

<151> 1998-11-20

<150> PCT/US99/00106

<151> 1999-01-05

<150> PCT/US99/05028

<151> 1999-03-08

<150> PCT/US99/05190

<151> 1999-03-10

<150> PCT/US99/10733

<151> 1999-05-14

<150> PCT/US99/12252

<151> 1999-06-02

<150> PCT/US99/28313

<151> 1999-11-30

<150> PCT/US99/28551

<151> 1999-12-02

<150> PCT/US99/28565

<151> 1999-12-02

<150> PCT/US99/30095

<151> 1999-12-16

<150> PCT/US99/31243

<151> 1999-12-30

<150> PCT/US99/31274

<151> 1999-12-30

<150> PCT/US00/00219

<151> 2000-05-01

<150> PCT/US00/00277

<151> 2000-01-06

<150> PCT/US00/00376

<151> 2000-01-06

<150> PCT/US00/03565

<151> 2000-02-11

<150> PCT/US00/04341

<151> 2000-02-18

<150> PCT/US00/05841

<151> 2000-03-02

<150> PCT/US00/07532

<151> 2000-03-21

<150> PCT/US00/05004

<151> 2000-02-24

<150> PCT/US00/06319

<151> 2000-03-10

<150> PCT/US00/08439

<151> 2000-03-30

<150> PCT/US00/13705

<151> 2000-05-17

<150> PCT/US00/14042

<151> 2000-05-22

<150> PCT/US00/14941

<151> 2000-05-30

<150> PCT/US00/15264

<151> 2000-06-02

<150> PCT/US00/20710

<151> 2000-07-28

<150> PCT/US00/23328

<151> 2000-08-24

<150> PCT/US00/32678

<151> 2000-12-01

<150> PCT/US00/34956

<151> 2000-12-20

<150> PCT/US01/06520

<151> 2001-02-28

<150> PCT/US01/09552

<151> 2001-03-22

<150> PCT/US01/17092

<151> 2001-05-25

<150> PCT/US01/17800

<151> 2001-06-01

<150> PCT/US01/19692

<151> 2001-06-20

<150> PCT/US01/21066

<151> 2001-06-29

<150> PCT/US01/21735

<151> 2001-07-09

<160> 624

<210> 1

<211> 1743

<212> DNA

<213> Homo sapiens

<400> 1

ccaggtccaa ctgcacctcg gttctatcga ttgaattccc cggggatcct 50  
ctagagatcc ctgcacctcg acccacgcgt ccgccaagct ggccctgcac 100  
ggctgcaagg gaggtcctcg tggacaggcc aggcaggtgg gcctcaggag 150  
gtgcctccag gcggccagtg ggctgaggc ccagcaagg gctagggtec 200  
atctccagtc ccaggacaca gcagcggcca ccatggccac gcctgggctc 250  
cagcagcatc agcagcccc aggaccggg gaggcacagg tggccccac 300  
caccggagg agcagctcct gcccctgtcc ggggatgac tgattctcct 350  
ccgccaggcc acccagagga gaaggccacc ccgcctggag gcacaggcca 400  
tgaggggctc tcaggaggtg ctgctgatgt ggcttctggt gttggcagt 450  
ggcggcacag agcacgccta ccggcccggc cgtaggggtg tgtgctgtcc 500  
cgggctcacg gggaccctgt ctccagtcg ttctgtcagc gtgtgtacca 550  
gcccttcctc accacctgcg acgggcaccg ggctgcagc acctaccgaa 600  
ccatttatag gaccgcctac cgcgcagcc ctgggctggc ccctgccagg 650  
cctcgctacg cgtgctgccc cggtggaag aggaccagc ggcttcctgg 700  
ggcctgtgga gcagcaatat gccagccgc atgccggaac ggaggagct 750  
gtgtccagcc tggccgtgc cgtgcctc caggatggc gggtgacact 800  
tgccagtcag atgtggatga atgcagtgt aggaggggcg gctgtcccca 850  
gcgctgcac aacaccgcg gcagttactg gtgccagtgt tgggaggggc 900  
acagcctgtc tgcagacggt aactctgtg tgccaaggg agggccccc 950  
agggtggccc ccaaccgac aggagtggac agtgcaatga aggaagaagt 1000  
gcagaggctg cagtccagg tggacctgt ggaggagaag ctgcagctgg 1050  
tgctggcccc actgcacagc ctggcctgc aggcactgga gcatgggctc 1100  
ccggaccccg gcagcctcct ggtgactcc ttccagcagc tcggccgcat 1150  
cgactccctg agcgagcaga ttctctcct ggaggagcag ctggggctcct 1200  
gtcctgcaa gaaagactcg tgactgcca gcgcccagg ctggactgag 1250  
cccctcacgc cgcctgcag ccccatgcc cctgccaac atgctgggg 1300  
tccagaagcc acctcgggt gactgagcg aaggccagg agggccttc 1350  
tccttttct cctcccttc cctcgggagg gtccccagac cctggcatgg 1400

gatgggctgg gatttttttt gtgaatccac ccctgggtac cccaccctg 1450  
gttaccceaa cgccatccca aggccagggtg ggcctcagc tgagggaagg 1500  
tacgagttcc cctgctggag cctgggaccc atggcacagg ccaggcagcc 1550  
cggaggctgg gtggggcctc agtgggggct gctgcctgac cccagcaca 1600  
ataaaaatga aacgtgaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 1650  
aaaaaaaaagg gcggccgcga ctctagagtc gacctgcaga agcttggccg 1700  
ccatggccca acttgtttat tgcagcttat aatggttaca aat 1743

<210> 2

<211> 295

<212> PRT

<213> Homo sapiens

<400> 2

Met	Thr	Asp	Ser	Pro	Pro	Pro	Gly	His	Pro	Glu	Glu	Lys	Ala	Thr	1	5	10	15
Pro	Pro	Gly	Gly	Thr	Gly	His	Glu	Gly	Leu	Ser	Gly	Gly	Ala	Ala	20	25	30	
Asp	Val	Ala	Ser	Gly	Val	Gly	Ser	Gly	Arg	His	Arg	Ala	Arg	Leu	35	40	45	
Pro	Ala	Arg	Pro	Leu	Gly	Cys	Val	Leu	Ser	Arg	Ala	His	Gly	Asp	50	55	60	
Pro	Val	Ser	Glu	Ser	Phe	Val	Gln	Arg	Val	Tyr	Gln	Pro	Phe	Leu	65	70	75	
Thr	Thr	Cys	Asp	Gly	His	Arg	Ala	Cys	Ser	Thr	Tyr	Arg	Thr	Ile	80	85	90	
Tyr	Arg	Thr	Ala	Tyr	Arg	Arg	Ser	Pro	Gly	Leu	Ala	Pro	Ala	Arg	95	100	105	
Pro	Arg	Tyr	Ala	Cys	Cys	Pro	Gly	Trp	Lys	Arg	Thr	Ser	Gly	Leu	110	115	120	
Pro	Gly	Ala	Cys	Gly	Ala	Ala	Ile	Cys	Gln	Pro	Pro	Cys	Arg	Asn	125	130	135	
Gly	Gly	Ser	Cys	Val	Gln	Pro	Gly	Arg	Cys	Arg	Cys	Pro	Ala	Gly	140	145	150	
Trp	Arg	Gly	Asp	Thr	Cys	Gln	Ser	Asp	Val	Asp	Glu	Cys	Ser	Ala	155	160	165	
Arg	Arg	Gly	Gly	Cys	Pro	Gln	Arg	Cys	Ile	Asn	Thr	Ala	Gly	Ser	170	175	180	
Tyr	Trp	Cys	Gln	Cys	Trp	Glu	Gly	His	Ser	Leu	Ser	Ala	Asp	Gly				



	185		190		195
Thr Leu Cys Val	Pro Lys Gly Gly Pro	Pro Arg Val Ala Pro	Asn		
	200	205	210		
Pro Thr Gly Val	Asp Ser Ala Met Lys	Glu Glu Val Gln Arg	Leu		
	215	220	225		
Gln Ser Arg Val	Asp Leu Leu Glu Glu	Lys Leu Gln Leu Val	Leu		
	230	235	240		
Ala Pro Leu His	Ser Leu Ala Ser Gln	Ala Leu Glu His Gly	Leu		
	245	250	255		
Pro Asp Pro Gly	Ser Leu Leu Val His	Ser Phe Gln Gln Leu	Gly		
	260	265	270		
Arg Ile Asp Ser	Leu Ser Glu Gln Ile	Ser Phe Leu Glu Glu	Gln		
	275	280	285		
Leu Gly Ser Cys	Ser Cys Lys Lys Asp	Ser			
	290	295			

<210> 3  
 <211> 21  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 3  
 tggagcagca atatgccagc c 21

<210> 4  
 <211> 22  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 4  
 ttttcactc ctgtcgggtt gg 22

<210> 5  
 <211> 46  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 5  
 ggtgacactt gccagtcaga tgtggatgaa tgcagtgcta ggaggg 46

<210> 6

<211> 2945

<212> DNA

<213> Homo sapiens

<400> 6

cgctcgcccc gtcgccccct gcctccccgc agagtcccct cgcggcagca 50  
gatgtgtgtg gggtcagccc acggcgggga ctatggtgaa attcccggcg 100  
ctcacgcact actggcccct gatccggttc ttggtgcccc tgggcatcac 150  
caacatagcc atcgacttcg gggagcaggc cttgaaccgg ggcattgctg 200  
ctgtcaagga ggatgcagtc gagatgctgg ccagctacgg gctggcgtag 250  
tcctcatga agttcttcac gggccccatg agtgacttca aaaatgtggg 300  
cctggtgttt gtgaacagca agagagacag gaccaaagcc gtcctgtgta 350  
tggtggtggc aggggccatc gctgccgtct ttcacacact gatagcttat 400  
agtgatttag gatactacat tatcaataaa ctgcaccatg tggacgagtc 450  
gggtggggagc aagacgagaa gggccttcct gtacctcgcc gcctttcctt 500  
tcatggacgc aatggcatgg acccatgctg gcattctctt aaaacacaaa 550  
tacagtttcc tgggtgggatg tgcctcaatc tcagatgtca tagctcaggt 600  
tgtttttcta gccattttgc ttcacagtca cctggaatgc cgggagcccc 650  
tgctcatccc gatcctctcc ttgtacatgg gcgcacttgt gcgctgcacc 700  
accctgtgcc tgggtacta caagaacatt cacgacatca tccctgacag 750  
aagtggcccc gagctggggg gagatgcaac aataagaaag atgctgagct 800  
tctggtggcc tttggtcta attctggcca cacagagaat cagtccgcct 850  
attgtcaacc tctttgtttc ccgggacctt ggtggcagtt ctgcagccac 900  
agaggcagtg gcgattttga cagccacata ccctgtgggt cacatgcat 950  
acggctgggt gacggaaatc cgtgctgtgt atcctgcttt cgacaagaat 1000  
aaccacagca aaaaactggt gagcacgagc aacacagtca cggcagccca 1050  
catcaagaag ttcaccttcg tctgcatggc tctgtcactc acgctctgtt 1100  
tcgtgatgtt ttggacaccc aacgtgtctg agaaaatctt gatagacatc 1150  
atcggagtgg actttgcctt tgcagaactc tgtgttgttc ctttgcggt 1200  
cttctccttc ttcccagttc cagtcacagt gagggcgcat ctaccgggt 1250  
ggctgatgac actgaagaaa accttcgtcc ttgccccag ctctgtgctg 1300

cggatcatcg tcctcatcgc cagcctcgtg gtctaccct acctgggggt 1350  
gcacggtgcg accctgggcg tgggctccct cctggcgggc tttgtgggag 1400  
aatccaccat ggtcgccatc gctgcgtgct atgtctaccg gaagcagaaa 1450  
aagaagatgg agaattgagtc ggccacggag ggggaagact ctgccatgac 1500  
agacatgcct ccgacagagg aggtgacaga catcgtggaa atgagagagg 1550  
agaatgaata aggcacggga cgccatgggc actgcaggga cggtcagtca 1600  
ggatgacact tcggcatcat ctcttcctc tcccatcgta tttgttccc 1650  
ttttttttgt tttgttttg taatgaaaga ggcttgatt taaaggtttc 1700  
gtgtcaattc tctagcatatc tgggtatgct cacactgacg gggggaccta 1750  
gtgaatggtc tttactgttg ctatgtaaaa acaaacgaaa caactgactt 1800  
catacccctg cctcacgaaa acccaaaaga cacagctgcc tcacggttga 1850  
cgttgtgtcc tcctcccctg gacaatctcc tcttggaaac aaaggactgc 1900  
agctgtgcca tcgcgcctcg gtcaccctgc acagcaggcc acagactctc 1950  
ctgtccccct tcacgctct taagaatcaa caggttaaaa ctcggttcc 2000  
tttgatttgc ttcccagtca catggccgta caaagagatg gagccccggt 2050  
ggcctcttaa atttccttc tgccacggag ttcgaaacca tctactccac 2100  
acatgcagga ggcgggtggc acgctgcagc ccggagtccc cgttcacact 2150  
gaggaacgga gacctgtgac cacagcaggc tgacagatgg acagaatctc 2200  
ccgtagaaag gtttggtttg aaatgccccg ggggcagcaa actgacatgg 2250  
ttgaatgata gcatttcact ctgcgttctc ctagatctga gcaagctgtc 2300  
agttctcacc cccaccgtgt atatacatga gctaactttt ttaaattgtc 2350  
acaaaagcgc atctccagat tccagaccct gccgcatgac ttttcctgaa 2400  
ggcttgcttt tccctcgctt ttctgaagg tcgcattaga gcgagtcaca 2450  
tgagcatcc taactttgca ttttagtttt tacagtgaac tgaagcttta 2500  
agtctcatcc agcattctaa tgccagggtg ctgtagggta acttttgaag 2550  
tagatatatt acctggttct gctatcctta gtcataactc tgcggtacag 2600  
gtaattgaga atgtactacg gtacttcctt cccacacat acgataaagc 2650  
aagacatttt ataacgatac cagagtcact atgtggctct ccctgaaata 2700  
acgcattoga aatccatgca gtgcagtata ttttctaag ttttgaaaag 2750

cagggtttttt ccttttaaaaa aattatagac acggttcact aaattgattt 2800  
 agtcagaatt cctagactga aagaacctaa acaaaaaaat atttttaaaga 2850  
 tataaatata tgctgtatat gttatgtaat ttatttttagg ctataatata 2900  
 tticctattt tcgcattttc aataaaatgt ctctaataca aaaaa 2945

<210> 7  
 <211> 492  
 <212> PRT  
 <213> Homo sapiens

<400> 7  
 Met Val Lys Phe Pro Ala Leu Thr His Tyr Trp Pro Leu Ile Arg  
 1 5 10 15  
 Phe Leu Val Pro Leu Gly Ile Thr Asn Ile Ala Ile Asp Phe Gly  
 20 25 30  
 Glu Gln Ala Leu Asn Arg Gly Ile Ala Ala Val Lys Glu Asp Ala  
 35 40 45  
 Val Glu Met Leu Ala Ser Tyr Gly Leu Ala Tyr Ser Leu Met Lys  
 50 55 60  
 Phe Phe Thr Gly Pro Met Ser Asp Phe Lys Asn Val Gly Leu Val  
 65 70 75  
 Phe Val Asn Ser Lys Arg Asp Arg Thr Lys Ala Val Leu Cys Met  
 80 85 90  
 Val Val Ala Gly Ala Ile Ala Ala Val Phe His Thr Leu Ile Ala  
 95 100 105  
 Tyr Ser Asp Leu Gly Tyr Tyr Ile Ile Asn Lys Leu His His Val  
 110 115 120  
 Asp Glu Ser Val Gly Ser Lys Thr Arg Arg Ala Phe Leu Tyr Leu  
 125 130 135  
 Ala Ala Phe Pro Phe Met Asp Ala Met Ala Trp Thr His Ala Gly  
 140 145 150  
 Ile Leu Leu Lys His Lys Tyr Ser Phe Leu Val Gly Cys Ala Ser  
 155 160 165  
 Ile Ser Asp Val Ile Ala Gln Val Val Phe Val Ala Ile Leu Leu  
 170 175 180  
 His Ser His Leu Glu Cys Arg Glu Pro Leu Leu Ile Pro Ile Leu  
 185 190 195  
 Ser Leu Tyr Met Gly Ala Leu Val Arg Cys Thr Thr Leu Cys Leu  
 200 205 210

Gly Tyr Tyr Lys Asn Ile His Asp Ile Ile Pro Asp Arg Ser Gly	215	220	225
Pro Glu Leu Gly Gly Asp Ala Thr Ile Arg Lys Met Leu Ser Phe	230	235	240
Trp Trp Pro Leu Ala Leu Ile Leu Ala Thr Gln Arg Ile Ser Arg	245	250	255
Pro Ile Val Asn Leu Phe Val Ser Arg Asp Leu Gly Gly Ser Ser	260	265	270
Ala Ala Thr Glu Ala Val Ala Ile Leu Thr Ala Thr Tyr Pro Val	275	280	285
Gly His Met Pro Tyr Gly Trp Leu Thr Glu Ile Arg Ala Val Tyr	290	295	300
Pro Ala Phe Asp Lys Asn Asn Pro Ser Asn Lys Leu Val Ser Thr	305	310	315
Ser Asn Thr Val Thr Ala Ala His Ile Lys Lys Phe Thr Phe Val	320	325	330
Cys Met Ala Leu Ser Leu Thr Leu Cys Phe Val Met Phe Trp Thr	335	340	345
Pro Asn Val Ser Glu Lys Ile Leu Ile Asp Ile Ile Gly Val Asp	350	355	360
Phe Ala Phe Ala Glu Leu Cys Val Val Pro Leu Arg Ile Phe Ser	365	370	375
Phe Phe Pro Val Pro Val Thr Val Arg Ala His Leu Thr Gly Trp	380	385	390
Leu Met Thr Leu Lys Lys Thr Phe Val Leu Ala Pro Ser Ser Val	395	400	405
Leu Arg Ile Ile Val Leu Ile Ala Ser Leu Val Val Leu Pro Tyr	410	415	420
Leu Gly Val His Gly Ala Thr Leu Gly Val Gly Ser Leu Leu Ala	425	430	435
Gly Phe Val Gly Glu Ser Thr Met Val Ala Ile Ala Ala Cys Tyr	440	445	450
Val Tyr Arg Lys Gln Lys Lys Lys Met Glu Asn Glu Ser Ala Thr	455	460	465
Glu Gly Glu Asp Ser Ala Met Thr Asp Met Pro Pro Thr Glu Glu	470	475	480
Val Thr Asp Ile Val Glu Met Arg Glu Glu Asn Glu	485	490	

<210> 8  
<211> 535  
<212> DNA  
<213> Homo sapiens

<220>  
<221> unsure  
<222> 33, 66, 96, 387  
<223> unknown base

<400> 8  
cctgacagaa gtgccccgga gctgggggag atncaacatt aagaagatgc 50  
tgagcttctg gtgccntttg gctctaattc tggccacaca gagaancagt 100  
cggcctattg tcaacctctt tgtttcccg gaccttggtg gcagttctgc 150  
agccacagag gcagtggcga ttttgacagc cacataccct gtgggtcaca 200  
tgccatacgg ctggttgacg gaaatccgtg ctgtgtatcc tgctttcgac 250  
aagaataacc ccagcaacaa actggtgagc acgagcaaca cagtcacggc 300  
ggccacatc aagaagttca ccttcgtctg catggctctg tcaactcacgc 350  
tctgtttcgt gatgttttgg acaccaacg tgtctgngaa aatcttgata 400  
gacatcatcg gagtggactt tgcctttgca gaactctgtg ttgttccttt 450  
gcggatcttc tccttcttcc cagttccagt cacagtgagg gcgcatctca 500  
ccgggtggct gatgacactg aagaaaacct tcgtc 535

<210> 9  
<211> 434  
<212> DNA  
<213> Homo sapiens

<220>  
<221> unsure  
<222> 32, 54, 80, 111, 117, 122, 139, 193, 205, 221, 226, 228, 273,  
293, 296, 305, 336, 358, 361  
<223> unknown base

<400> 9  
tgacggaatc ccgggctggg tatcctgggt tngacaagat aaacccccag 50  
caanaaattg gggagcaggg caaacagtn acgggcagcc cacatcaaga 100  
agttcacctt ngtttgnatg gntctgtcaa ctcacgctnt gtttcgtgat 150  
gttttggaaca ccaaagtgt ttgagaaaat tttgatagac atnatcggag 200  
tggantttgc ctttgacagaa ntttgngntg ttcctttgcg gattttctcc 250  
tttttcccag ttccagtcac agngagggcg catctcaccg ggnggntgat 300

gacantgaag aaaacctttg tccttgcccc cagctntttg gtgcggatca 350  
ttgtcctnat ngccagcctt gtggctctac cctacctggg ggtgcacggt 400  
gcgaccctgg gcgtgggttc cctcctggcg ggca 434

<210> 10  
<211> 154  
<212> DNA  
<213> Homo sapiens

<220>  
<221> unsure  
<222> 33, 49, 68, 83, 90, 98, 119  
<223> unknown base

<400> 10  
tattccagcgt tccggctcac gggagggcgc atntcaccgg gtggctgang 50  
acactgaaga aaaccttngt ccttgcccc agntttgtgn tgcggatnat 100  
cgctctcatc gccagcctng tggctctacc ctacctgggg gtgcacggtg 150  
agac 154

<210> 11  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 11  
ctgatccggt tcttggtgcc cctg 24

<210> 12  
<211> 18  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 12  
gctctgtcac tcacgctc 18

<210> 13  
<211> 18  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 13  
tcattcttcc cctctccc 18

<210> 14  
<211> 18  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 14  
ccttccgcca cggagttc 18

<210> 15  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 15  
ggcaaagtcc actccgatga tgtc 24

<210> 16  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 16  
gcctgctgtg gtcacaggtc tccg 24

<210> 17  
<211> 45  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 17  
tcggggagca ggccttgaac cggggcattg ctgctgtcaa ggagg 45

<210> 18  
<211> 1901  
<212> DNA  
<213> Homo sapiens

<400> 18  
gccccgcgcc cggcgccggg cgcccgaagc cgggagccac cgccatgggg 50  
gcctgcctgg gagcctgctc cctgctcagc tgccgctcct gcctctgagg 100  
ctctgcccc tgcatcctgt gcagctgctg ccccgccagc cgcaactcca 150



cogtgagccg cctcatcttc acgttcttcc tcttcctggg ggtgctggtg 200  
tccatcatta tgctgagccc gggcgtggag agtcagctct acaagctgcc 250  
ctgggtgtgt gaggaggggg cgggatccc caccgtcctg cagggccaca 300  
togactgtgg ctccctgctt ggctaccgcg ctgtctaccg catgtgcttc 350  
gccacggcgg ccttcttctt cttctttttc accctgctca tgctctgcgt 400  
gagcagcagc cgggaccccc gggctgccat ccagaatggg ttttggttct 450  
ttaagttcct gatcctggtg ggctcaccg tgggtgcctt ctacatccct 500  
gacggctcct tcaccaacat ctggttctac ttgggcgtcg tgggctcctt 550  
cctcttcac ctcattccagc tgggtgctgt catcgacttt gcgcactcct 600  
ggaaccagcg gtggtggggc aaggccgagg agtgcgattc ccgtgcctgg 650  
tacgcaggcc tcttcttctt cactctcctc ttctacttgc tgcgatogc 700  
ggcgtggcg ctgatgttca tgtactacac tgagcccagc ggctgccacg 750  
agggcaaggt cttcatcagc ctcaacctca ccttctgtgt ctgcgtgtcc 800  
atcgctgctg tcctgccaa ggtccaggac gccagccca actcgggtct 850  
gctgcaggcc tcggtcatca ccctctacac catgtttgtc acctggtcag 900  
ccctatccag tatccctgaa cagaaatgca accccattt gccaacccag 950  
ctgggcaacg agacagttgt ggcaggcccc gagggctatg agaccagtg 1000  
gtgggatgcc ccgagcattg tgggcctcat catcttctc ctgtgcaccc 1050  
tcttcatcag tctgcgtcc tcagaccacc ggcaggtgaa cagcctgatg 1100  
cagaccgagg agtgcccacc tatgctagac gccacacagc agcagcagca 1150  
gcaggtggca gcctgtgagg gccgggcctt tgacaacgag caggacggcg 1200  
tcacctacag ctactccttc ttccacttct gcctggtgct ggctcactg 1250  
cacgtcatga tgacgtcac caactggtac aagcccgggtg agaccggaa 1300  
gatgatcagc acgtggaccg ccgtgtgggt gaagatctgt gccagctggg 1350  
cagggctgct cctctacctg tggaccctgg tagccccact cctcctgcgc 1400  
aaccgcgact tcagctgagg cagcctcaca gcctgccatc tggtgccctc 1450  
tgccacctgg tgctctcgg ctcggtgaca gccaacctgc cccctccca 1500  
caccaatcag ccaggctgag cccccacccc tgcccagct ccaggacctg 1550  
cccctgagcc gggccttcta gtcgtagtgc cttcagggtc cgaggagcat 1600

caggctcctg cagagcccca tccccccgcc acaccacac ggtggagctg 1650  
 cctcttcctt cccctcctcc ctgttgcca tactcagcat ctcggatgaa 1700  
 agggctccct tgctctcagg ctccacggga ggggggctgc tggagagagc 1750  
 ggggaactcc caccacagtg gggcatccgg cactgaagcc ctggtgttcc 1800  
 tggtcacgtc cccagggga cctgcccc ttctggact tcgtgcctta 1850  
 ctgagtctct aagacttttt ctaataaaca agccagtgcg tgtaaaaaaa 1900  
 a 1901

<210> 19  
 <211> 457  
 <212> PRT  
 <213> Homo sapiens

<400> 19  
 Met Gly Ala Cys Leu Gly Ala Cys Ser Leu Leu Ser Cys Ala Ser  
 1 5 10 15  
 Cys Leu Cys Gly Ser Ala Pro Cys Ile Leu Cys Ser Cys Cys Pro  
 20 25 30  
 Ala Ser Arg Asn Ser Thr Val Ser Arg Leu Ile Phe Thr Phe Phe  
 35 40 45  
 Leu Phe Leu Gly Val Leu Val Ser Ile Ile Met Leu Ser Pro Gly  
 50 55 60  
 Val Glu Ser Gln Leu Tyr Lys Leu Pro Trp Val Cys Glu Glu Gly  
 65 70 75  
 Ala Gly Ile Pro Thr Val Leu Gln Gly His Ile Asp Cys Gly Ser  
 80 85 90  
 Leu Leu Gly Tyr Arg Ala Val Tyr Arg Met Cys Phe Ala Thr Ala  
 95 100 105  
 Ala Phe Phe Phe Phe Phe Phe Thr Leu Leu Met Leu Cys Val Ser  
 110 115 120  
 Ser Ser Arg Asp Pro Arg Ala Ala Ile Gln Asn Gly Phe Trp Phe  
 125 130 135  
 Phe Lys Phe Leu Ile Leu Val Gly Leu Thr Val Gly Ala Phe Tyr  
 140 145 150  
 Ile Pro Asp Gly Ser Phe Thr Asn Ile Trp Phe Tyr Phe Gly Val  
 155 160 165  
 Val Gly Ser Phe Leu Phe Ile Leu Ile Gln Leu Val Leu Leu Ile  
 170 175 180

Asp Phe Ala His Ser Trp Asn Gln Arg Trp Leu Gly Lys Ala Glu	185	190	195
Glu Cys Asp Ser Arg Ala Trp Tyr Ala Gly Leu Phe Phe Phe Thr	200	205	210
Leu Leu Phe Tyr Leu Leu Ser Ile Ala Ala Val Ala Leu Met Phe	215	220	225
Met Tyr Tyr Thr Glu Pro Ser Gly Cys His Glu Gly Lys Val Phe	230	235	240
Ile Ser Leu Asn Leu Thr Phe Cys Val Cys Val Ser Ile Ala Ala	245	250	255
Val Leu Pro Lys Val Gln Asp Ala Gln Pro Asn Ser Gly Leu Leu	260	265	270
Gln Ala Ser Val Ile Thr Leu Tyr Thr Met Phe Val Thr Trp Ser	275	280	285
Ala Leu Ser Ser Ile Pro Glu Gln Lys Cys Asn Pro His Leu Pro	290	295	300
Thr Gln Leu Gly Asn Glu Thr Val Val Ala Gly Pro Glu Gly Tyr	305	310	315
Glu Thr Gln Trp Trp Asp Ala Pro Ser Ile Val Gly Leu Ile Ile	320	325	330
Phe Leu Leu Cys Thr Leu Phe Ile Ser Leu Arg Ser Ser Asp His	335	340	345
Arg Gln Val Asn Ser Leu Met Gln Thr Glu Glu Cys Pro Pro Met	350	355	360
Leu Asp Ala Thr Gln Gln Gln Gln Gln Gln Val Ala Ala Cys Glu	365	370	375
Gly Arg Ala Phe Asp Asn Glu Gln Asp Gly Val Thr Tyr Ser Tyr	380	385	390
Ser Phe Phe His Phe Cys Leu Val Leu Ala Ser Leu His Val Met	395	400	405
Met Thr Leu Thr Asn Trp Tyr Lys Pro Gly Glu Thr Arg Lys Met	410	415	420
Ile Ser Thr Trp Thr Ala Val Trp Val Lys Ile Cys Ala Ser Trp	425	430	435
Ala Gly Leu Leu Leu Tyr Leu Trp Thr Leu Val Ala Pro Leu Leu	440	445	450
Leu Arg Asn Arg Asp Phe Ser	455		

<210> 20  
<211> 24  
<212> DNA  
<213> Artificial Sequence  
  
<220>  
<223> Synthetic oligonucleotide probe  
  
<400> 20  
gccgcctcat cttcacgttc ttcc 24  
  
<210> 21  
<211> 20  
<212> DNA  
<213> Artificial Sequence  
  
<220>  
<223> Synthetic oligonucleotide probe  
  
<400> 21  
tcatccagct ggtgctgctc 20  
  
<210> 22  
<211> 20  
<212> DNA  
<213> Artificial Sequence  
  
<220>  
<223> Synthetic oligonucleotide probe  
  
<400> 22  
cttcttccac ttctgctgg 20  
  
<210> 23  
<211> 18  
<212> DNA  
<213> Artificial Sequence  
  
<220>  
<223> Synthetic oligonucleotide probe  
  
<400> 23  
cctgggcaaa aatgcaac 18  
  
<210> 24  
<211> 24  
<212> DNA  
<213> Artificial Sequence  
  
<220>  
<223> Synthetic oligonucleotide probe  
  
<400> 24  
caggaatgta gaaggcacc acgg 24  
  
<210> 25  
<211> 24

<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 25  
tggcacagat cttcacccac acgg 24

<210> 26  
<211> 50  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 26  
tgtccatcat tatgctgagc ccgggctgtg agagtcagct ctacaagctg 50

<210> 27  
<211> 1351  
<212> DNA  
<213> Homo sapiens

<400> 27  
gagcgaggcc ggggactgaa ggtgtgggtg tcgagccctc tggcagaggg 50  
ttaacctggg tcaaatgcac ggattctcac ctctacagt tacgctctcc 100  
cgcgccacgt ccgcgaggac ttgaagtcct gagcgctcaa gtttgtccgt 150  
aggctcgagag aaggccatgg aggtgccgcc accggcaccg cggagctttc 200  
tctgtagagc attgtgccta tttccccgag tctttgctgc cgaagctgtg 250  
actgccgatt cggaagtcct tgaggagcgt cagaagcggc ttccctacgt 300  
cccagagccc tattaccgag aatctggatg ggaccgcctc cgggagctgt 350  
ttggcaaaga tgaacagcag agaatttcaa aggaccttgc taatatctgt 400  
aagacggcag ctacagcagg catcattggc tgggtgtatg ggggaatacc 450  
agcttttatt catgctaaac aacaatacat tgagcagagc caggcagaaa 500  
tttatcataa ccggtttgat gctgtgcaat ctgcacatcg tgctgccaca 550  
cgaggcttca ttcgttatgg ctggcgctgg ggttgagaaa ctgcagtgtt 600  
tgtgactata ttcaacacag tgaacactag tctgaatgta taccgaaata 650  
aagatgcctt aagccatttt gtaattgcag gagctgtcac gggaagtctt 700  
tttaggataa acgtaggcct gcgtggcctg gtggctggtg gcataattgg 750  
agccttgctg ggcactcctg taggaggcct gctgatggca tttcagaagt 800

acgctggtga gactgttcag gaaagaaaac agaaggatcg aaaggcactc 850  
 catgagctaa aactggaaga gtggaaaggc agactacaag ttactgagca 900  
 cctccctgag aaaattgaaa gtagtttacg ggaagatgaa cctgagaatg 950  
 atgctaagaa aattgaagca ctgctaaacc ttcctagaaa cccttcagta 1000  
 atagataaac aagacaagga ctgaaagtgc tctgaacttg aaactcactg 1050  
 gagagctgaa gggagctgcc atgtccgatg aatgccaaca gacaggccac 1100  
 tctttggtca gcctgctgac aaatttaagt gctggtacct gtggtggcag 1150  
 tggcttgctc ttgtcttttt cttttctttt taactaagaa tggggctggt 1200  
 gtactctcac ttactttatc cttaaattta aatacatact tatgtttgta 1250  
 ttaatctatc aatatatgca tacatggata tatccacca cctagatttt 1300  
 aagcagtaaa taaaacattt cgcaaaagat taaagttgaa ttttacagtt 1350  
 t 1351

<210> 28  
 <211> 285  
 <212> PRT  
 <213> Homo sapiens

<400> 28  
 Met Glu Val Pro Pro Ala Pro Arg Ser Phe Leu Cys Arg Ala  
 1 5 10 15  
 Leu Cys Leu Phe Pro Arg Val Phe Ala Ala Glu Ala Val Thr Ala  
 20 25 30  
 Asp Ser Glu Val Leu Glu Glu Arg Gln Lys Arg Leu Pro Tyr Val  
 35 40 45  
 Pro Glu Pro Tyr Tyr Pro Glu Ser Gly Trp Asp Arg Leu Arg Glu  
 50 55 60  
 Leu Phe Gly Lys Asp Glu Gln Gln Arg Ile Ser Lys Asp Leu Ala  
 65 70 75  
 Asn Ile Cys Lys Thr Ala Ala Thr Ala Gly Ile Ile Gly Trp Val  
 80 85 90  
 Tyr Gly Gly Ile Pro Ala Phe Ile His Ala Lys Gln Gln Tyr Ile  
 95 100 105  
 Glu Gln Ser Gln Ala Glu Ile Tyr His Asn Arg Phe Asp Ala Val  
 110 115 120  
 Gln Ser Ala His Arg Ala Ala Thr Arg Gly Phe Ile Arg Tyr Gly  
 125 130 135

Trp	Arg	Trp	Gly	Trp	Arg	Thr	Ala	Val	Phe	Val	Thr	Ile	Phe	Asn	
				140					145					150	
Thr	Val	Asn	Thr	Ser	Leu	Asn	Val	Tyr	Arg	Asn	Lys	Asp	Ala	Leu	
				155					160					165	
Ser	His	Phe	Val	Ile	Ala	Gly	Ala	Val	Thr	Gly	Ser	Leu	Phe	Arg	
				170					175					180	
Ile	Asn	Val	Gly	Leu	Arg	Gly	Leu	Val	Ala	Gly	Gly	Ile	Ile	Gly	
				185					190					195	
Ala	Leu	Leu	Gly	Thr	Pro	Val	Gly	Gly	Leu	Leu	Met	Ala	Phe	Gln	
				200					205					210	
Lys	Tyr	Ala	Gly	Glu	Thr	Val	Gln	Glu	Arg	Lys	Gln	Lys	Asp	Arg	
				215					220					225	
Lys	Ala	Leu	His	Glu	Leu	Lys	Leu	Glu	Glu	Trp	Lys	Gly	Arg	Leu	
				230					235					240	
Gln	Val	Thr	Glu	His	Leu	Pro	Glu	Lys	Ile	Glu	Ser	Ser	Leu	Arg	
				245					250					255	
Glu	Asp	Glu	Pro	Glu	Asn	Asp	Ala	Lys	Lys	Ile	Glu	Ala	Leu	Leu	
				260					265					270	
Asn	Leu	Pro	Arg	Asn	Pro	Ser	Val	Ile	Asp	Lys	Gln	Asp	Lys	Asp	
				275					280					285	

<210> 29  
 <211> 324  
 <212> DNA  
 <213> Homo sapiens

<400> 29  
 cggaagtccc ttgaggagcg tcagaagcgg cttccctacg tcccagagcc 50  
 ctattaccgc gaatctggat gggaccgctc cgggagctgt ttggcaaaga 100  
 tgaacagcag agaatttcaa aggaccttgc taatatctgt aagacggcag 150  
 ctacagcagg catcattggc tgggtgtatg ggggaatacc agcttttatt 200  
 catgctaaac aacaatacat tgagcagagc caggcagaaa tttatcataa 250  
 ccggtttgat gctgtgcaat ctgcacatcg tgctgccaca cgaggcttca 300  
 ttcgttcattg gctggcgccg aacc 324

<210> 30  
 <211> 377  
 <212> DNA  
 <213> Homo sapiens

<220>

<221> unsure  
<222> 262, 330, 371  
<223> unknown base

<400> 30  
tcaagtttgt ccgtaggtcg agagaaggcc atggaggtgc cgccaccggc 50  
accgcgaggc tttttttctgt agagcattgt gcctatttcc ccgagttttt 100  
gctgccgaag ctgtgactgc cgattcggaa gtccttgagg agcgtcagaa 150  
gcggtttccc tacgtcccag agccctatta cccggaattt ggatggggacc 200  
gcctccggga gctgtttggc aaagatgaac agcagagaat ttcaaaggac 250  
cttgctgata tntgtaagac ggcagctaca gcaggcatca ttggctgggt 300  
gtatggggga ataccagctt ttattcatgn taaacaacaa tacattgagc 350  
agagccaggc agaaatttat nataacc 377

<210> 31  
<211> 20  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 31  
tcgtacagtt acgctctccc 20

<210> 32  
<211> 20  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 32  
cttgaggagc gtcagaagcg 20

<210> 33  
<211> 20  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 33  
ataacgaatg aagcctcgtg 20

<210> 34  
<211> 40  
<212> DNA



<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 34

gctaatatct gtaagacggc agctacagca ggcatcattg 40

<210> 35

<211> 1819

<212> DNA

<213> Homo sapiens

<400> 35

gagccgcccg cgcgcgcgcg ccgcgcaactg cagccccagg ccccgggccc 50  
ccaccacagt ctgcgttgct gccccgcctg ggccaggccc caaaggcaag 100  
gacaaagcag ctgtcagga acctccgccg gagtcgaatt tacgtgcagc 150  
tgccggcaac cacaggttcc aagatggttt gcgggggctt cgcgtgttcc 200  
aagaactgcc tgtgcgccct caacctgctt tacaccttg ttagtctgct 250  
gctaattgga attgctgcgt ggggcattgg cttegggctg atttccagtc 300  
tccgagtggc cgcgctggtc attgcagtgg gcattcttct gtctctgatt 350  
gcttttagtg gtctgattgg agctgtaaaa catcatcagg tgttgcatt 400  
tttttatatg attattctgt tacttgatt tattgttcag tttctgtat 450  
cttgcgcttg tttagccctg aaccaggagc aacagggcca gcttctggag 500  
gttggttgga acaatacggc aagtgtcga aatgacatcc agagaaatct 550  
aaactgctgt gggttccgaa gtgttaacct aatgacacc tgtctggcta 600  
gctgtgttaa aagtgaccac tcgtgctcgc catgtgtcc aatcatagga 650  
gaatatgctg gagaggtttt gagatttggt ggtggcattg gcctgttctt 700  
cagttttaca gagatcctgg gtgtttggct gacctacaga tacaggaacc 750  
agaaagaccc ccgcgcaat cctagtgcatt tcctttgatg agaaaacaag 800  
gaagatttcc tttcgtatta tgatcttggt cactttctgt aattttctgt 850  
taagctccat ttgccagttt aaggaaggaa aactatctg gaaaagtacc 900  
ttattgatag tggaattata ttttttact ctatgtttct ctacatgttt 950  
ttttcttcc gttgctgaaa aatatttgaa acttggtgct tctgaagctc 1000  
ggtggcacct ggaatttact gtattcattg tcgggcactg tccactgtgg 1050  
cctttcttag catttttacc tgcagaaaaa ctttgtatgg taccactgtg 1100

ttggttatat ggtgaatctg aacgtacatc tcaactggtat aattatatgt 1150  
 agcactgtgc tgtgtagata gttcctactg gaaaaagagt ggaaatttat 1200  
 taaaatcaga aagtatgaga tcctgttatg ttaagggaaa tccaaattcc 1250  
 caattttttt tgggtctttt aggaaagatt gttgtggtaa aaagtgttag 1300  
 tataaaaaatg ataatttact tgtagtcttt tatgattaca ccaatgtatt 1350  
 ctagaaatag ttatgtctta ggaaattgtg gtttaatttt tgacttttac 1400  
 aggtaagtgc aaaggagaag tggtttcatg aaatgttcta atgtataata 1450  
 acattttacct tcagcctcca tcagaatgga acgagttttg agtaatcagg 1500  
 aagtatatct atatgatctt gatattgttt tataataatt tgaagtctaa 1550  
 aagactgcat ttttaaaciaa gttagtatta atgcgttggc ccacgtagca 1600  
 aaaagatatt tgattatctt aaaaattgtt aaataaccgtt ttcattgaaat 1650  
 ttctcagtat tgtaacagca acttgtcaaa cctaagcata tttgaatatg 1700  
 atctcccata atttgaaatt gaaatcgtat tgtgtggctc tgtatattct 1750  
 gttaaaaaat taaaggacag aaacctttct ttgtgtatgc atgtttgaat 1800  
 taaaagaaag taatggaag 1819

<210> 36  
 <211> 204  
 <212> PRT  
 <213> Homo sapiens

<400> 36  
 Met Val Cys Gly Gly Phe Ala Cys Ser Lys Asn Cys Leu Cys Ala  
 1 5 10 15  
 Leu Asn Leu Leu Tyr Thr Leu Val Ser Leu Leu Leu Ile Gly Ile  
 20 25 30  
 Ala Ala Trp Gly Ile Gly Phe Gly Leu Ile Ser Ser Leu Arg Val  
 35 40 45  
 Val Gly Val Val Ile Ala Val Gly Ile Phe Leu Phe Leu Ile Ala  
 50 55 60  
 Leu Val Gly Leu Ile Gly Ala Val Lys His His Gln Val Leu Leu  
 65 70 75  
 Phe Phe Tyr Met Ile Ile Leu Leu Leu Val Phe Ile Val Gln Phe  
 80 85 90  
 Ser Val Ser Cys Ala Cys Leu Ala Leu Asn Gln Glu Gln Gln Gly  
 95 100 105

Gln	Leu	Leu	Glu	Val	Gly	Trp	Asn	Asn	Thr	Ala	Ser	Ala	Arg	Asn	
				110					115					120	
Asp	Ile	Gln	Arg	Asn	Leu	Asn	Cys	Cys	Gly	Phe	Arg	Ser	Val	Asn	
				125					130					135	
Pro	Asn	Asp	Thr	Cys	Leu	Ala	Ser	Cys	Val	Lys	Ser	Asp	His	Ser	
				140					145					150	
Cys	Ser	Pro	Cys	Ala	Pro	Ile	Ile	Gly	Glu	Tyr	Ala	Gly	Glu	Val	
				155					160					165	
Leu	Arg	Phe	Val	Gly	Gly	Ile	Gly	Leu	Phe	Phe	Ser	Phe	Thr	Glu	
				170					175					180	
Ile	Leu	Gly	Val	Trp	Leu	Thr	Tyr	Arg	Tyr	Arg	Asn	Gln	Lys	Asp	
				185					190					195	
Pro	Arg	Ala	Asn	Pro	Ser	Ala	Phe	Leu							
				200											

<210> 37  
 <211> 390  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> unsure  
 <222> 20, 35, 61, 83, 106, 130, 133, 187, 232, 260, 336  
 <223> unknown base

<400> 37  
 tgattggagc tgtaaaaaan tcttcaggtg ttgtnatttt tttatatgat 50  
 tattctgtaa nttgtattta ttgttcagtt ttntgtatct tgcgcttgtt 100  
 tagccttgaa ccaggagcaa cagggtcagn ttntggaggt tgggtggaac 150  
 aatacggcaa gtgctcgaaa tgacatccag agaaatntaa actgctgtgg 200  
 gttccgaagt gttaacccaa atgacacctg tntggctagc tgtgttaaaa 250  
 gtgaccactn gtgctcgcca tgtgctccaa tcataggaga atatgctgga 300  
 gaggttttga gatttggttg tggcattggc ctgttnttca gttttacaga 350  
 gatcctgggt gtttggtgga cctacagata caggaaccag 390

<210> 38  
 <211> 566  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> unsure  
 <222> 27

<223> unknown base

<400> 38

aatcccaa at tccccaat ttttggnc ttttagggaaa gatgtgtgt 50  
ggtaaaaaagt gttagtataa aaatgataat ttacttgtag tcttttatga 100  
ttacaccaat gtattctaga atagttatgt cttaggaaat tgtgggttaa 150  
tttttgactt ttacaggtaa gtgcaaagga gaagtgggtt catgaaatgt 200  
tctaattgtat aataacattt accttcagcc tcccatcaga atggaacgag 250  
ttttgagtaa tccaggaagt atatctatat gatcttgata ttgttttata 300  
taatttgaag tctaaaagac tgcattttta aacaagttag tattaatgcg 350  
ttggcccacg tagcaaaaag atatttgatt atcttaaaaa ttgttaaata 400  
ccgttttcat gaaagttctc agtattgtaa cagcaacttg tcaaacctaa 450  
gcatatttga atatgatctc ccataatttg aaattgaaat cgtattgtgt 500  
ggaggaaatg gcaatcttat gtgtgctgaa ggacacagta agagcaccaa 550  
gttgtgcccc acttgc 566

<210> 39

<211> 264

<212> DNA

<213> Homo sapiens

<220>

<221> unsure

<222> 84-85, 206

<223> unknown base

<400> 39

atgattattc tggtacttgt atttattgtt cagttttatg gtatcttgcg 50  
cttgtttagc ccctgaaacc aggagcaaca gggnnacagct tcctggaggt 100  
tggttggtcaa caatcacggc caagtgactc cgcaaatgac atcccagaga 150  
aatcctaaac tgctgtgggt tccgaagtgt taaccctaat gacacctgtc 200  
tggctngctg tgttaaaagt gaccactcgt gctcgccatg tgctccaatc 250  
ataggagaat atgc 264

<210> 40

<211> 21

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 40  
accacgtct gcgttgctgc c 21

<210> 41  
<211> 18  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 41  
gagaatatgc tggagagg 18

<210> 42  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 42  
aggaatgcac taggattcgc gcgg 24

<210> 43  
<211> 45  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 43  
ggccccaaag gcaaggacaa agcagctgtc agggaaacctc cgccg 45

<210> 44  
<211> 2061  
<212> DNA  
<213> Homo sapiens

<400> 44  
cagtcacat gaagctgggc tgtgtcctca tggcctgggc cctctacatt 50  
tcccttggtg tgetctgggt ggcccagatg ctactggctg ccagttttga 100  
gacgctgcag tgtgaggac ctgtctgcac tgaggagagc agctgccaca 150  
cggaggatga cttgactgat gcaagggaag ctggcttcca ggtcaaggcc 200  
tacactttca gtgaacctt ccacctgatt gtgtcctatg actggctgat 250  
cctccaaggt ccagccaagc cagtttttga aggggacctg ctggttctgc 300  
gctgccaggc ctggcaagac tggccactga ctcaggtgac cttctaccga 350

gatggctcag ctctgggtcc ccccgggcct aacaggggaat tctccatcac 400  
cgtggtacaa aaggcagaca gcgggcacta cactgcagt ggcatcttcc 450  
agagccctgg tcctgggatc ccagaaacag catctgttgt ggctatcaca 500  
gtccaagaac tgtttccagc gccaatctc agagctgtac cctcagctga 550  
acccaagca ggaagcccca tgaccctgag ttgtcagaca aagttgcccc 600  
tgcagaggtc agctgccgc ctcctcttct cttctacaa ggatggaagg 650  
atagtcaaaa gcagggggct ctctcagaa ttccagatcc ccacagcttc 700  
agaagatcac tccgggtcat actggtgtga ggagccact gaggacaacc 750  
aagtttgaa acagagcccc cagctagaga tcagagtga gggtgcttcc 800  
agctctgtg cacctccac attgaatcca gtcctcaga aatcagctgc 850  
tccaggaact gtcctgagg aggcctctg gcctctgcct ccgcccga 900  
ccccatctc tgaggatcca ggcttttct ctctctggg gatgccagat 950  
cctcatctgt atcaccagat gggccttct ctcaaacaca tgcaggatgt 1000  
gagagtcctc ctcggtcacc tgctcatgga gttgaggaa ttatctggcc 1050  
accagaagcc tgggaccaca aaggctactg ctgaatagaa gtaaacagtt 1100  
catccatgat ctcaactaac caccocaata aatctgattc tttattttct 1150  
cttctgtcc tgcacatat cataagtact ttacaagtt gtcccagtg 1200  
tttgtagaa taatgtagt aggtgagtg aaataaatt atataaagt 1250  
agaattagag tttagctata attgtgtatt ctctctaac acaacagaat 1300  
tctgctgtct agatcaggaa tttctatctg ttatatcgac cagaatgttg 1350  
tgatttaaag agaactaatg gaagtggatt gaatacagca gtctcaactg 1400  
ggggcaattt tgccccccag aggacattgg gcaatgttg gagacatttt 1450  
ggtcattata cttggggggg tgggggatgg tgggatgtgt gtctactggc 1500  
atccagtaaa tagaagccag gggtgccgct aaacatccta taatgcacag 1550  
ggcagtaacc cacaacgaaa aataatctgg cccaaatgt cagttgtact 1600  
gagtttgaga aacccagcc taatgaaacc ctaggtgttg ggctctggaa 1650  
tgggactttg tcccttctaa ttattatctc tttccagcct cattcagcta 1700  
ttcttactga cataccagtc tttagctggg gctatggct gttctttagt 1750  
tctagtttgt atccctcaa aagccattat gttgaaatcc taatcccaa 1800

ggtgatggca ttaagaagtg ggcctttggg aagtgattag atcaggagtg 1850  
 cagagccctc atgattagga ttagtgccct tatttaaaaa ggccccagag 1900  
 agctaactca cccttcacc atatgaggac gtggcaagaa gatgacatgt 1950  
 atgagaacca aaaaacagct gtcgccaaac accgactctg tcgttgccct 2000  
 gatcttgaac ttccagcctc cagaactatg agaaataaaa ttctggttgt 2050  
 ttgtagccta a 2061

<210> 45

<211> 359

<212> PRT

<213> Homo sapiens

<400> 45

Met	Lys	Leu	Gly	Cys	Val	Leu	Met	Ala	Trp	Ala	Leu	Tyr	Leu	Ser	1	5	10	15
Leu	Gly	Val	Leu	Trp	Val	Ala	Gln	Met	Leu	Leu	Ala	Ala	Ser	Phe	20	25	30	
Glu	Thr	Leu	Gln	Cys	Glu	Gly	Pro	Val	Cys	Thr	Glu	Glu	Ser	Ser	35	40	45	
Cys	His	Thr	Glu	Asp	Asp	Leu	Thr	Asp	Ala	Arg	Glu	Ala	Gly	Phe	50	55	60	
Gln	Val	Lys	Ala	Tyr	Thr	Phe	Ser	Glu	Pro	Phe	His	Leu	Ile	Val	65	70	75	
Ser	Tyr	Asp	Trp	Leu	Ile	Leu	Gln	Gly	Pro	Ala	Lys	Pro	Val	Phe	80	85	90	
Glu	Gly	Asp	Leu	Leu	Val	Leu	Arg	Cys	Gln	Ala	Trp	Gln	Asp	Trp	95	100	105	
Pro	Leu	Thr	Gln	Val	Thr	Phe	Tyr	Arg	Asp	Gly	Ser	Ala	Leu	Gly	110	115	120	
Pro	Pro	Gly	Pro	Asn	Arg	Glu	Phe	Ser	Ile	Thr	Val	Val	Gln	Lys	125	130	135	
Ala	Asp	Ser	Gly	His	Tyr	His	Cys	Ser	Gly	Ile	Phe	Gln	Ser	Pro	140	145	150	
Gly	Pro	Gly	Ile	Pro	Glu	Thr	Ala	Ser	Val	Val	Ala	Ile	Thr	Val	155	160	165	
Gln	Glu	Leu	Phe	Pro	Ala	Pro	Ile	Leu	Arg	Ala	Val	Pro	Ser	Ala	170	175	180	
Glu	Pro	Gln	Ala	Gly	Ser	Pro	Met	Thr	Leu	Ser	Cys	Gln	Thr	Lys	185	190	195	

Leu	Pro	Leu	Gln	Arg	Ser	Ala	Ala	Arg	Leu	Leu	Phe	Ser	Phe	Tyr	200	205	210
Lys	Asp	Gly	Arg	Ile	Val	Gln	Ser	Arg	Gly	Leu	Ser	Ser	Glu	Phe	215	220	225
Gln	Ile	Pro	Thr	Ala	Ser	Glu	Asp	His	Ser	Gly	Ser	Tyr	Trp	Cys	230	235	240
Glu	Ala	Ala	Thr	Glu	Asp	Asn	Gln	Val	Trp	Lys	Gln	Ser	Pro	Gln	245	250	255
Leu	Glu	Ile	Arg	Val	Gln	Gly	Ala	Ser	Ser	Ser	Ala	Ala	Pro	Pro	260	265	270
Thr	Leu	Asn	Pro	Ala	Pro	Gln	Lys	Ser	Ala	Ala	Pro	Gly	Thr	Ala	275	280	285
Pro	Glu	Glu	Ala	Pro	Gly	Pro	Leu	Pro	Pro	Pro	Pro	Thr	Pro	Ser	290	295	300
Ser	Glu	Asp	Pro	Gly	Phe	Ser	Ser	Pro	Leu	Gly	Met	Pro	Asp	Pro	305	310	315
His	Leu	Tyr	His	Gln	Met	Gly	Leu	Leu	Leu	Lys	His	Met	Gln	Asp	320	325	330
Val	Arg	Val	Leu	Leu	Gly	His	Leu	Leu	Met	Glu	Leu	Arg	Glu	Leu	335	340	345
Ser	Gly	His	Gln	Lys	Pro	Gly	Thr	Thr	Lys	Ala	Thr	Ala	Glu		350	355	

<210> 46

<211> 18

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 46

tgggctgtgt cctcatgg 18

<210> 47

<211> 18

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 47

tttccagcgc caattctc 18

<210> 48



<211> 23  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 48  
agttcttgga ctgtgatagc cac 23

<210> 49  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 49  
aaacttggtt gtcctcagtg gctg 24

<210> 50  
<211> 45  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 50  
gtgagggacc tgtctgcact gaggagagca gctgccacac ggagg 45

<210> 51  
<211> 2181  
<212> DNA  
<213> Homo sapiens

<400> 51  
cccacgcgtc cgcccacgcg tccgcccacg ggtccgccca cgcgtccggg 50  
ccaccagaag tttgagcctc tttggtagca ggaggctgga agaaaggaca 100  
gaagtagctc tggctgtgat ggggatctta ctgggcctgc tactcctggg 150  
gcacctaaca gtggacactt atggccgtcc catcctggaa gtgccagaga 200  
gtgtaacagg accttggaag ggggatgtga atcttcctg cacctatgac 250  
cccctgcaag gctacaccca agtcttggtg aagtggctgg tacaacgtgg 300  
ctcagaccct gtcaccatct ttctacgtga ctcttctgga gaccatatcc 350  
agcaggcaaa gtaccagggc cgccctgcatg tgagccacaa ggttccagga 400  
gatgtatccc tccaattgag caccctggag atggatgacc ggagccacta 450  
cacgtgtgaa gtcacctggc agactcctga tggcaaccaa gtcgtgagag 500

ataagattac tgagctccgt gtccagaaac tctctgtctc caagcccaca 550  
gtgacaactg gcagcggtta tggcttcacg gtgccccagg gaatgaggat 600  
tagccttcaa tgccaggctc ggggttctcc tcccatcagt tatatttgg 650  
ataagcaaca gactaataac caggaaccca tcaaagtagc aaccctaagt 700  
accttactct tcaagcctgc ggtgatagcc gactcaggct cctatttctg 750  
cactgccaag ggccagggtg gctctgagca gcacagcgac attgtgaagt 800  
ttgtgggtcaa agactcctca aagctactca agaccaagac tgaggcacct 850  
acaaccatga catacccctt gaaagcaaca tctacagtga agcagtcctg 900  
ggactggacc actgacatgg atggctacct tggagagacc agtgctgggc 950  
caggaaagag cctgcctgtc tttgccatca tcctcatcat ctcttgtgc 1000  
tgtatgggtg tttttacat ggcttatatc atgctctgtc ggaagacatc 1050  
ccaacaagag catgtctacg aagcagccag gtaagaaagt ctctcctctt 1100  
ccatttttga ccccgctcct gccctcaatt ttgattactg gcaggaaatg 1150  
tggaggaagg ggggtgtggc acagacccaa tcctaaggcc ggaggccttc 1200  
agggtcagga catagctgcc ttccctctct caggcacctt ctgaggttgt 1250  
tttggccctc tgaacacaaa ggataattta gatccatctg ccttctgctt 1300  
ccagaatccc tgggtggtag gatcctgata attaatggc aagaattgag 1350  
gcagaagggt gggaaaccag gaccacagcc ccaagtccct tcttatgggt 1400  
ggtgggctct tgggcatag ggcacatgcc agagaggcca acgactctgg 1450  
agaaaccatg aggggtggca tcttcgcaag tggctgctcc agtgatgagc 1500  
caacttccca gaatctgggc aacaactact ctgatgagcc ctgcatagga 1550  
caggagtacc agatcatcgc ccagatcaat ggcaactacg cccgcctgct 1600  
ggacacagtt cctctggatt atgagtttct ggccactgag ggcaaaagt 1650  
tctgttaaaa atgccccatt aggccaggat ctgctgacat aattgcctag 1700  
tcagtcttg ccttctgcat ggccttcttc cctgctacct ctcttctgg 1750  
atagcccaaa gtgtccgcct accaactctg gagccgctgg gagtcaactg 1800  
ctttgcctg gaatttgcca gatgcatctc aagtaagcca gctgctggat 1850  
ttggtctggt gcccttctag tatctctgcc gggggcttct ggtactctc 1900

tctaaatacc agaggaaga tgcccatagc actaggactt ggtcatcatg 1950  
 cctacagaca ctattcaact ttggcatctt gccaccagaa gacccgaggg 2000  
 aggctcagct ctgccagctc agaggaccag ctatatccag gatcatttct 2050  
 ctttcttcag ggccagacag cttttaattg aaattgttat ttcacaggcc 2100  
 agggttcagt tctgctcctc cactataagt ctaatgttct gactctctcc 2150  
 tgggtgctcaa taaatatcta atcataacag c 2181

<210> 52

<211> 321

<212> PRT

<213> Homo sapiens

<400> 52

Met	Gly	Ile	Leu	Leu	Gly	Leu	Leu	Leu	Leu	Gly	His	Leu	Thr	Val
1				5					10					15
Asp	Thr	Tyr	Gly	Arg	Pro	Ile	Leu	Glu	Val	Pro	Glu	Ser	Val	Thr
				20					25					30
Gly	Pro	Trp	Lys	Gly	Asp	Val	Asn	Leu	Pro	Cys	Thr	Tyr	Asp	Pro
				35					40					45
Leu	Gln	Gly	Tyr	Thr	Gln	Val	Leu	Val	Lys	Trp	Leu	Val	Gln	Arg
				50					55					60
Gly	Ser	Asp	Pro	Val	Thr	Ile	Phe	Leu	Arg	Asp	Ser	Ser	Gly	Asp
				65					70					75
His	Ile	Gln	Gln	Ala	Lys	Tyr	Gln	Gly	Arg	Leu	His	Val	Ser	His
				80					85					90
Lys	Val	Pro	Gly	Asp	Val	Ser	Leu	Gln	Leu	Ser	Thr	Leu	Glu	Met
				95					100					105
Asp	Asp	Arg	Ser	His	Tyr	Thr	Cys	Glu	Val	Thr	Trp	Gln	Thr	Pro
				110					115					120
Asp	Gly	Asn	Gln	Val	Val	Arg	Asp	Lys	Ile	Thr	Glu	Leu	Arg	Val
				125					130					135
Gln	Lys	Leu	Ser	Val	Ser	Lys	Pro	Thr	Val	Thr	Thr	Gly	Ser	Gly
				140					145					150
Tyr	Gly	Phe	Thr	Val	Pro	Gln	Gly	Met	Arg	Ile	Ser	Leu	Gln	Cys
				155					160					165
Gln	Ala	Arg	Gly	Ser	Pro	Pro	Ile	Ser	Tyr	Ile	Trp	Tyr	Lys	Gln
				170					175					180
Gln	Thr	Asn	Asn	Gln	Glu	Pro	Ile	Lys	Val	Ala	Thr	Leu	Ser	Thr
				185					190					195

Leu	Leu	Phe	Lys	Pro	Ala	Val	Ile	Ala	Asp	Ser	Gly	Ser	Tyr	Phe
				200					205					210
Cys	Thr	Ala	Lys	Gly	Gln	Val	Gly	Ser	Glu	Gln	His	Ser	Asp	Ile
				215					220					225
Val	Lys	Phe	Val	Val	Lys	Asp	Ser	Ser	Lys	Leu	Leu	Lys	Thr	Lys
				230					235					240
Thr	Glu	Ala	Pro	Thr	Thr	Met	Thr	Tyr	Pro	Leu	Lys	Ala	Thr	Ser
				245					250					255
Thr	Val	Lys	Gln	Ser	Trp	Asp	Trp	Thr	Thr	Asp	Met	Asp	Gly	Tyr
				260					265					270
Leu	Gly	Glu	Thr	Ser	Ala	Gly	Pro	Gly	Lys	Ser	Leu	Pro	Val	Phe
				275					280					285
Ala	Ile	Ile	Leu	Ile	Ile	Ser	Leu	Cys	Cys	Met	Val	Val	Phe	Thr
				290					295					300
Met	Ala	Tyr	Ile	Met	Leu	Cys	Arg	Lys	Thr	Ser	Gln	Gln	Glu	His
				305					310					315
Val	Tyr	Glu	Ala	Ala	Arg									
				320										

<210> 53  
 <211> 24  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 53  
 tatccctcca attgagcacc ctgg 24

<210> 54  
 <211> 21  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 54  
 gtcggaagac atcccaacaa g 21

<210> 55  
 <211> 24  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 55

cttcacaatg tcgctgtgct gctc 24

<210> 56

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 56

agccaaatcc agcagctggc ttac 24

<210> 57

<211> 50

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 57

tggatgaccg gagccactac acgtgtgaag tcacctggca gactcctgat 50

<210> 58

<211> 2458

<212> DNA

<213> Homo sapiens

<400> 58

gcgccgggag cccatctgcc cccaggggca cggggcgcg ggcgggctcc 50

cgccccggcac atggctgcag ccacctcgcg cgcaccccga ggcggcgcg 100

ccagctcgcc cgaggctcgt cggaggcgcc cggccgcccc ggagccaagc 150

agcaactgag cggggaagcg cccgcgtccg gggatcgga tgtccctcct 200

ccttctcctc ttgctagttt cctactatgt tggaaacctg gggactcaca 250

ctgagatcaa gagagtggca gaggaaaagg tcactttgcc ctgccaccat 300

caactggggc ttccagaaaa agacactctg gatattgaat ggctgctcac 350

cgataatgaa gggaacccaa aagtggatgat cacttactcc agtcgtcatg 400

tctacaataa cttgactgag gaacagaagg gccgagtggc ctttgcttcc 450

aatttctctg caggagatgc ctccttgagc attgaacctc tgaagcccag 500

tgatgagggc cgttacacct gtaagggtta gaattcaggc cgctacgtgt 550

ggagccatgt catcttaaaa gtcttagtga gaccatccaa gcccaagtgt 600

gagttggaag gagagctgac agaaggaagt gacctgactt tgcatgtgtga 650

gtcatcctct ggcacagagc ccattgtgta ttactggcag cgaatccgag 700  
agaaagaggg agaggatgaa cgtctgcctc ccaaacttag gattgactac 750  
aaccaccctg gacgagttct gctgcagaat cttaccatgt cctactctgg 800  
actgtaccag tgcacagcag gcaacgaagc tgggaaggaa agctgtgtgg 850  
tgcgagtaac tgtacagtat gtacaaagca tcggcatggg tgcaggagca 900  
gtgacaggca tagtggctgg agccctgctg attttcctct tgggtgtggct 950  
gctaaccga aggaaagaca aagaaagata tgaggaagaa gagagaccta 1000  
atgaaattcg agaagatgct gaagctcaa aagcccgctt tgtgaaacct 1050  
agtcctctct cctcaggctc tcggagctca cgctctgggt cttcctccac 1100  
tcgctccaca gcaaatagtg cctcacgcag ccagcggaca ctgtcaactg 1150  
acgcagcacc ccagccaggg ctggccaccc aggcatagc cctagtgggg 1200  
ccagaggatg gaggttctga accaaagaaa gtccaccatg ctaatctgac 1250  
caaagcagaa accacaccca gcatgatccc cagccagagc agagccttcc 1300  
aaacggtctg aattacaatg gacttgactc ccacgcttcc ctaggagtca 1350  
gggtctttgg actcttctcg tcattggagc tcaagtcacc agccacacaa 1400  
ccagatgaga ggtcatctaa gtagcagtga gcattgcacg gaacagattc 1450  
agatgagcat tttccttata caataccaaa caagcaaaag gatgtaagct 1500  
gattcatctg taaaaaggca tcttattgtg cctttagacc agagtaaggg 1550  
aaagcaggag tccaaatcta tttgttgacc aggacctgtg gtgagaaggt 1600  
tggggaaagg tgaggatgaat atacctaaaa cttttaatgt gggatatttt 1650  
gtatcagtgc tttgattcac aattttcaag aggaaatggg atgctgtttg 1700  
taaattttct atgcatttct gcaaacttat tggattatta gttattcaga 1750  
cagtcaagca gaaccacag ccttattaca cctgtctaca ccatgtactg 1800  
agctaaccac ttctaagaaa ctccaaaaaa ggaaacatgt gtcttctatt 1850  
ctgacttaac ttcatttgtc ataaggtttg gatattaatt tcaaggggag 1900  
ttgaaatagt gggagatgga gaagagtga tgagtttctc ccaactctata 1950  
ctaactctac tatttgtatt gagcccaaaa taactatgaa aggagacaaa 2000  
aatttgtgac aaaggattgt gaagagcttt ccatcttcat gatgttatga 2050  
ggattgttga caaacattag aaatatataa tggagcaatt gtggatttcc 2100

cctcaaatca gatgcctcta aggactttcc tgctagatat ttctggaagg 2150  
 agaaaataca acatgtcatt tatcaacgtc cttagaaaga attcttctag 2200  
 agaaaaaggg atctaggaat gctgaaagat tacccaacat accattatag 2250  
 tctcttcttt ctgagaaaat gtgaaaccag aattgcaaga ctgggtggac 2300  
 tagaaaggga gattagatca gttttctctt aatatgtcaa ggaaggtagc 2350  
 cgggcatggg gccaggcacc tgtaggaaaa tccagcaggt ggaggttgca 2400  
 gtgagccgag attatgccat tgcactccag cctgggtgac agagcgggac 2450  
 tccgtctc 2458

<210> 59

<211> 373

<212> PRT

<213> Homo sapiens

<400> 59

Met	Ser	Leu	Leu	Leu	Leu	Leu	Leu	Leu	Val	Ser	Tyr	Tyr	Val	Gly
1				5					10					15
Thr	Leu	Gly	Thr	His	Thr	Glu	Ile	Lys	Arg	Val	Ala	Glu	Glu	Lys
				20					25					30
Val	Thr	Leu	Pro	Cys	His	His	Gln	Leu	Gly	Leu	Pro	Glu	Lys	Asp
				35					40					45
Thr	Leu	Asp	Ile	Glu	Trp	Leu	Leu	Thr	Asp	Asn	Glu	Gly	Asn	Gln
				50					55					60
Lys	Val	Val	Ile	Thr	Tyr	Ser	Ser	Arg	His	Val	Tyr	Asn	Asn	Leu
				65					70					75
Thr	Glu	Glu	Gln	Lys	Gly	Arg	Val	Ala	Phe	Ala	Ser	Asn	Phe	Leu
				80					85					90
Ala	Gly	Asp	Ala	Ser	Leu	Gln	Ile	Glu	Pro	Leu	Lys	Pro	Ser	Asp
				95					100					105
Glu	Gly	Arg	Tyr	Thr	Cys	Lys	Val	Lys	Asn	Ser	Gly	Arg	Tyr	Val
				110					115					120
Trp	Ser	His	Val	Ile	Leu	Lys	Val	Leu	Val	Arg	Pro	Ser	Lys	Pro
				125					130					135
Lys	Cys	Glu	Leu	Glu	Gly	Glu	Leu	Thr	Glu	Gly	Ser	Asp	Leu	Thr
				140					145					150
Leu	Gln	Cys	Glu	Ser	Ser	Ser	Gly	Thr	Glu	Pro	Ile	Val	Tyr	Tyr
				155					160					165
Trp	Gln	Arg	Ile	Arg	Glu	Lys	Glu	Gly	Glu	Asp	Glu	Arg	Leu	Pro

170										175					180				
Pro	Lys	Ser	Arg	Ile	Asp	Tyr	Asn	His	Pro	Gly	Arg	Val	Leu	Leu					
				185					190					195					
Gln	Asn	Leu	Thr	Met	Ser	Tyr	Ser	Gly	Leu	Tyr	Gln	Cys	Thr	Ala					
				200					205					210					
Gly	Asn	Glu	Ala	Gly	Lys	Glu	Ser	Cys	Val	Val	Arg	Val	Thr	Val					
				215					220					225					
Gln	Tyr	Val	Gln	Ser	Ile	Gly	Met	Val	Ala	Gly	Ala	Val	Thr	Gly					
				230					235					240					
Ile	Val	Ala	Gly	Ala	Leu	Leu	Ile	Phe	Leu	Leu	Val	Trp	Leu	Leu					
				245					250					255					
Ile	Arg	Arg	Lys	Asp	Lys	Glu	Arg	Tyr	Glu	Glu	Glu	Glu	Arg	Pro					
				260					265					270					
Asn	Glu	Ile	Arg	Glu	Asp	Ala	Glu	Ala	Pro	Lys	Ala	Arg	Leu	Val					
				275					280					285					
Lys	Pro	Ser	Ser	Ser	Ser	Ser	Gly	Ser	Arg	Ser	Ser	Arg	Ser	Gly					
				290					295					300					
Ser	Ser	Ser	Thr	Arg	Ser	Thr	Ala	Asn	Ser	Ala	Ser	Arg	Ser	Gln					
				305					310					315					
Arg	Thr	Leu	Ser	Thr	Asp	Ala	Ala	Pro	Gln	Pro	Gly	Leu	Ala	Thr					
				320					325					330					
Gln	Ala	Tyr	Ser	Leu	Val	Gly	Pro	Glu	Val	Arg	Gly	Ser	Glu	Pro					
				335					340					345					
Lys	Lys	Val	His	His	Ala	Asn	Leu	Thr	Lys	Ala	Glu	Thr	Thr	Pro					
				350					355					360					
Ser	Met	Ile	Pro	Ser	Gln	Ser	Arg	Ala	Phe	Gln	Thr	Val							
				365					370										

<210> 60

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 60

ccagtgcaca gcaggcaacg aagc 24

<210> 61

<211> 24

<212> DNA

<213> Artificial Sequence



<220>

<223> Synthetic oligonucleotide probe

<400> 61

actaggctgt atgcctgggt gggc 24

<210> 62

<211> 43

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 62

gtatgtacaa agcatcggca tggttgcagg agcagtgaca ggc 43

<210> 63

<211> 3534

<212> DNA

<213> Homo sapiens

<400> 63

gtcgttcctt tgctctctcg cgcccagtc tctccctgg ttctcctcag 50

ccgctgtcgg aggagagcac ccggagacgc gggctgcagt cgcggcggct 100

tctccccgcc tgggcggcct cgccgctggg cagggtgctga gcgcccctag 150

agcctccctt gccgcctccc tctctgccc ggccgcagca gtgcacatgg 200

ggtgttgag gtagatgggc tccgggcccg ggaggcggcg gtggatgcgg 250

cgctgggcag aagcagccgc cgattccagc tgccccgcgc gccccgggcg 300

ccctgcgag tccccggtc agccatgggg acctctccga gcagcagcac 350

cgccctcgcc tctgcagcc gcctgcccc cggagccaca gccacgatga 400

tcgcgggctc ctttctctg cttggattcc ttagcaccac cacagctcag 450

ccagaacaga aggcctcgaa tctcattggc acataccgcc atgttgaccg 500

tgccaccggc cagggtgctaa cctgtgacaa gtgtccagca ggaacctatg 550

tctctgagca ttgtaccaac acaagcctgc gcgtctgcag cagttgccct 600

gtggggacct ttaccaggca tgagaatggc atagagaaat gccatgactg 650

tagtcagcca tgcccatggc caatgattga gaaattacct tgtgctgcct 700

tgactgaccg agaatgcact tgcccacctg gcatgttcca gtctaacgct 750

acctgtgccc ccctacggt gtgtcctgtg ggttgggggtg tgcggaagaa 800

agggacagag actgaggatg tgcgggtgtaa gcagtgtgct cggggtacct 850

tctcagatgt gccttctagt gtgatgaaat gcaaagcata cacagactgt 900  
ctgagtcaga acctggtggt gatcaagccg gggaccaagg agacagacaa 950  
cgtctgtggc aactcccgt ccttctccag ctccacctca cttcccctg 1000  
gcacagccat cttccacgc cctgagcaca tggaaacca tgaagtcct 1050  
tcctccactt atgttccaa aggcataaac tcaacagaat ccaactcttc 1100  
tgctctgtt agaccaaagg tactgagtag catccaggaa gggacagtcc 1150  
ctgacaacac aagctcagca agggggaagg aagacgtgaa caagaccctc 1200  
ccaaaccttc aggtagtcaa ccaccagcaa ggccccacc acagacacat 1250  
cctgaagctg ctgccgtcca tggaggccac tggggcgag aagtccagca 1300  
cgcccatcaa gggcccaag aggggacatc ctagacagaa cctacacaag 1350  
cattttgaca tcaatgagca tttgccctgg atgattgtgc ttttctgct 1400  
gctggtgctt gtggtgattg tgggtgtgag tatccgaaa agctcgagga 1450  
ctctgaaaaa ggggccccg caggatcca gtgccattgt ggaaaaggca 1500  
gggctgaaga aatccatgac tccaaccag aaccgggaga aatggatcta 1550  
ctactgcaat ggccatggtg tcatatcct gaagcttgta gcagcccaag 1600  
tggaagcca gtggaagat atctatcagt ttctttgcaa tgccagttag 1650  
aggaggttg ctgctttctc caatgggtac acagccgacc acgagcggc 1700  
ctacgcagct ctgcagcact ggaccatccg gggccccgag gccagcctcg 1750  
cccagctaat tagcgccctg cgccagcacc ggagaaacga tgttgaggag 1800  
aagattcgtg ggctgatgga agacaccacc cagctggaaa ctgacaaact 1850  
agctctcccg atgagcccca gcccgcttag cccgagcccc atcccagcc 1900  
ccaacgcgaa acttgagaat tccgctctcc tgacggtgga gccttccca 1950  
caggacaaga acaagggtt ctctgtgat ggtcggagc cccttctccg 2000  
ctgtgactct acatccagcg gctcctccg gctgagcagg aacggttcct 2050  
ttattaccaa agaaaagaag gacacagtgt tgcggcagg acgcctggac 2100  
ccctgtgact tgcagcctat ctttgatgac atgctccact ttctaaatcc 2150  
tgaggagctg cgggtgattg aagagattcc ccaggctgag gacaaactag 2200  
accggtatt cgaaattatt ggagtcaaga gccaggaagc cagccagacc 2250  
ctcctggact ctgtttatag ccatcttcct gacctgctgt agaacatagg 2300

gatactgcat tctggaatt actcaattta gtggcagggg ggttttttaa 2350  
ttttctcttg tttctgattt ttgttgtttg ggggtgtgtg gtgtgtttgt 2400  
gtgtgtgtgt gtgtgtgtgt gtgtgtgtgt gtttaacaga gaatatggcc 2450  
agtgcctgag ttctttctcc ttctctctct ctcttttttt tttaaataac 2500  
tcttctggga agttggttta taagcctttg ccagggtgaa ctggtgtgaa 2550  
ataccaccca ctaaagtttt ttaagttcca tttttctctc attttgcctt 2600  
cttatgtatt ttcaagatta ttctgtgcac tttaaattta cttacttac 2650  
cataaatgca gtgtgacttt tcccacacac tggattgtga ggctcttaac 2700  
ttcttaaaaag tataatggca tcttgtgaat cctataagca gtctttatgt 2750  
ctcttaacat tcacacctac tttttaaaaa caaatattat tactattttt 2800  
attattgttt gtcctttata aattttctta aagattaaga aaatttaaga 2850  
ccccattgag ttactgtaat gcaattcaac tttgagttat cttttaaata 2900  
tgtcttgat agttcatatt catggctgaa acttgaccac actattgctg 2950  
attgtatggg tttcacctgg acaccgtgta gaatgctga ttactgtac 3000  
tcttcttatg ctaatatgct ctgggctgga gaaatgaaat cctcaagcca 3050  
tcaggatttg ctatttaagt ggcttgacaa ctgggccacc aaagaacttg 3100  
aacttcacct tttaggattt gagctgttct ggaacacatt gctgcacttt 3150  
ggaaagtcaa aatcaagtgc cagtggcgcc cttccatag agaatttgcc 3200  
cagctttgct ttaaaagatg tcttggtttt tatatacaca taatcaatag 3250  
gtccaatctg ctctcaaggc cttggctctg gtgggattcc ttcaccaatt 3300  
actttaatta aaaatggctg caactgtaag aaccctgtc tgatataatt 3350  
gcaactatgc tcccatttac aaatgtacct tctaagtctc agttgccagg 3400  
ttccaatgca aaggtggcgt ggactccctt tgtgtgggtg gggtttgtgg 3450  
gtagtgggtg aggaccgata tcagaaaaat gccttcaagt gtactaattt 3500  
attaataaac attaggtggt tgtaaaaaaa aaaa 3534

<210> 64

<211> 655

<212> PRT

<213> Homo sapiens

<400> 64

Met	Gly	Thr	Ser	Pro	Ser	Ser	Ser	Thr	Ala	Leu	Ala	Ser	Cys	Ser	1	5	10	15
Arg	Ile	Ala	Arg	Arg	Ala	Thr	Ala	Thr	Met	Ile	Ala	Gly	Ser	Leu	20	25	30	
Leu	Leu	Leu	Gly	Phe	Leu	Ser	Thr	Thr	Thr	Ala	Gln	Pro	Glu	Gln	35	40	45	
Lys	Ala	Ser	Asn	Leu	Ile	Gly	Thr	Tyr	Arg	His	Val	Asp	Arg	Ala	50	55	60	
Thr	Gly	Gln	Val	Leu	Thr	Cys	Asp	Lys	Cys	Pro	Ala	Gly	Thr	Tyr	65	70	75	
Val	Ser	Glu	His	Cys	Thr	Asn	Thr	Ser	Leu	Arg	Val	Cys	Ser	Ser	80	85	90	
Cys	Pro	Val	Gly	Thr	Phe	Thr	Arg	His	Glu	Asn	Gly	Ile	Glu	Lys	95	100	105	
Cys	His	Asp	Cys	Ser	Gln	Pro	Cys	Pro	Trp	Pro	Met	Ile	Glu	Lys	110	115	120	
Leu	Pro	Cys	Ala	Ala	Leu	Thr	Asp	Arg	Glu	Cys	Thr	Cys	Pro	Pro	125	130	135	
Gly	Met	Phe	Gln	Ser	Asn	Ala	Thr	Cys	Ala	Pro	His	Thr	Val	Cys	140	145	150	
Pro	Val	Gly	Trp	Gly	Val	Arg	Lys	Lys	Gly	Thr	Glu	Thr	Glu	Asp	155	160	165	
Val	Arg	Cys	Lys	Gln	Cys	Ala	Arg	Gly	Thr	Phe	Ser	Asp	Val	Pro	170	175	180	
Ser	Ser	Val	Met	Lys	Cys	Lys	Ala	Tyr	Thr	Asp	Cys	Leu	Ser	Gln	185	190	195	
Asn	Leu	Val	Val	Ile	Lys	Pro	Gly	Thr	Lys	Glu	Thr	Asp	Asn	Val	200	205	210	
Cys	Gly	Thr	Leu	Pro	Ser	Phe	Ser	Ser	Ser	Thr	Ser	Pro	Ser	Pro	215	220	225	
Gly	Thr	Ala	Ile	Phe	Pro	Arg	Pro	Glu	His	Met	Glu	Thr	His	Glu	230	235	240	
Val	Pro	Ser	Ser	Thr	Tyr	Val	Pro	Lys	Gly	Met	Asn	Ser	Thr	Glu	245	250	255	
Ser	Asn	Ser	Ser	Ala	Ser	Val	Arg	Pro	Lys	Val	Leu	Ser	Ser	Ile	260	265	270	
Gln	Glu	Gly	Thr	Val	Pro	Asp	Asn	Thr	Ser	Ser	Ala	Arg	Gly	Lys	275	280	285	

Glu Asp Val Asn Lys Thr Leu Pro Asn Leu Gln Val Val Asn His	290	295	300
Gln Gln Gly Pro His His Arg His Ile Leu Lys Leu Leu Pro Ser	305	310	315
Met Glu Ala Thr Gly Gly Glu Lys Ser Ser Thr Pro Ile Lys Gly	320	325	330
Pro Lys Arg Gly His Pro Arg Gln Asn Leu His Lys His Phe Asp	335	340	345
Ile Asn Glu His Leu Pro Trp Met Ile Val Leu Phe Leu Leu Leu	350	355	360
Val Leu Val Val Ile Val Val Cys Ser Ile Arg Lys Ser Ser Arg	365	370	375
Thr Leu Lys Lys Gly Pro Arg Gln Asp Pro Ser Ala Ile Val Glu	380	385	390
Lys Ala Gly Leu Lys Lys Ser Met Thr Pro Thr Gln Asn Arg Glu	395	400	405
Lys Trp Ile Tyr Tyr Cys Asn Gly His Gly Ile Asp Ile Leu Lys	410	415	420
Leu Val Ala Ala Gln Val Gly Ser Gln Trp Lys Asp Ile Tyr Gln	425	430	435
Phe Leu Cys Asn Ala Ser Glu Arg Glu Val Ala Ala Phe Ser Asn	440	445	450
Gly Tyr Thr Ala Asp His Glu Arg Ala Tyr Ala Ala Leu Gln His	455	460	465
Trp Thr Ile Arg Gly Pro Glu Ala Ser Leu Ala Gln Leu Ile Ser	470	475	480
Ala Leu Arg Gln His Arg Arg Asn Asp Val Val Glu Lys Ile Arg	485	490	495
Gly Leu Met Glu Asp Thr Thr Gln Leu Glu Thr Asp Lys Leu Ala	500	505	510
Leu Pro Met Ser Pro Ser Pro Leu Ser Pro Ser Pro Ile Pro Ser	515	520	525
Pro Asn Ala Lys Leu Glu Asn Ser Ala Leu Leu Thr Val Glu Pro	530	535	540
Ser Pro Gln Asp Lys Asn Lys Gly Phe Phe Val Asp Glu Ser Glu	545	550	555
Pro Leu Leu Arg Cys Asp Ser Thr Ser Ser Gly Ser Ser Ala Leu	560	565	570

Ser	Arg	Asn	Gly	Ser	Phe	Ile	Thr	Lys	Glu	Lys	Lys	Asp	Thr	Val
				575					580					585
Leu	Arg	Gln	Val	Arg	Leu	Asp	Pro	Cys	Asp	Leu	Gln	Pro	Ile	Phe
				590					595					600
Asp	Asp	Met	Leu	His	Phe	Leu	Asn	Pro	Glu	Glu	Leu	Arg	Val	Ile
				605					610					615
Glu	Glu	Ile	Pro	Gln	Ala	Glu	Asp	Lys	Leu	Asp	Arg	Leu	Phe	Glu
				620					625					630
Ile	Ile	Gly	Val	Lys	Ser	Gln	Glu	Ala	Ser	Gln	Thr	Leu	Leu	Asp
				635					640					645
Ser	Val	Tyr	Ser	His	Leu	Pro	Asp	Leu	Leu					
				650					655					

<210> 65  
 <211> 24  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 65  
 gtagcagtgc acatggggtg ttgg 24

<210> 66  
 <211> 24  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 66  
 accgcacatc ctccagtctct gtcc 24

<210> 67  
 <211> 50  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 67  
 acgatgatgc cgggctccct tctcctgctt ggattcctta gcaccaccac 50

<210> 68  
 <211> 2412  
 <212> DNA  
 <213> Homo sapiens

<400> 68

atgggaagcc agtaacactg tggcctacta tctcttccgt ggtgccatct 50  
acatTTTTgg gactcgggaa ttatgaggta gaggtggagg cggagccgga 100  
tgtcagaggt cctgaaatag tcaccatggg ggaaaatgat ccgcctgctg 150  
ttgaagcccc cttctcattc cgatcgcttt ttggccttga tgatttgaaa 200  
ataagtctg ttgcaccaga tgcagatgct gttgctgcac agatcctgtc 250  
actgctgcca ttgaagtttt ttccaatcat cgtcattggg atcattgcat 300  
tgatattagc actggccatt ggtctgggca tccacttcga ctgctcaggg 350  
aagtacagat gtcgctcatc ctttaagtgt atcgagctga tagctcgatg 400  
tgacggagtc tcggattgca aagacgggga ggacgagtac cgctgtgtcc 450  
gggtgggtgg tcagaatgcc gtgctccagg tgttcacagc tgcttcgtgg 500  
aagaccatgt gctccgatga ctggaagggt cactacgaa atgttgctg 550  
tgcccaactg ggtttcccaa gctatgtgag ttcagataac ctgagagtga 600  
gctcgtgga ggggcagttc cgggaggagt ttgtgtccat cgatcacctc 650  
ttgccagatg acaaggtagc tgcattacac cactcagtat atgtgaggga 700  
gggatgtgcc tctggccacg tggttacctt gcagtgcaca gcctgtggtc 750  
atagaagggg ctacagctca cgcctcgtgg gtggaaacat gtccttgctc 800  
tcgcagtggc cctggcaggc cagccttcag ttccagggt accacctgtg 850  
cgggggctct gtcctcacgc ccctgtggat catcactgct gcacactgtg 900  
tttatgactt gtacctcccc aagtcattgga ccatccaggt gggcttagtt 950  
tccctgttgg acaatccagc cccatccac ttggtggaga agattgtcta 1000  
ccacagcaag tacaagccaa agaggctggg caatgacatc gcccttatga 1050  
agctggccgg gccactcacg ttcaatgaaa tgatccagcc tgtgtgcctg 1100  
cccaactctg aagagaactt cccgatgga aaagtgtgct ggacgtcagg 1150  
atggggggcc acagaggatg gaggtgacgc ctcccctgtc ctgaaccacg 1200  
cggccgtccc tttgatttcc aacaagatct gcaaccacag ggacgtgtac 1250  
ggtggtcatc tctccccctc catgctctgc gcgggctacc tgacgggtgg 1300  
cgtggacagc tgccaggggg acagcggggg gccctggtg tgtcaagaga 1350  
ggaggctgtg gaagttagtg ggagcgacca gctttggcat cggtgcgca 1400  
gaggtgaaca agcctggggg gtacaccctg gtcacctcct tcctggactg 1450

gatccacgag cagatggaga gagacctaaa aacctgaaga ggaaggggac 1500  
aagtagccac ctgagttcct gaggtgatga agacagcccg atcctcccct 1550  
ggactcccgt gtaggaacct gcacacgagc agacaccctt ggagctetga 1600  
gttccggcac cagtagcagg cccgaaagag gcacccttcc atctgattcc 1650  
agcacaacct tcaagctgct ttttggtttt tggttttttg aggtggagtc 1700  
tcgctctgtt gccaggtctg gagtgcagtg gcgaaatccc tgctcactgc 1750  
agcctccgct tccctgggtc aagcgattct cttgcctcag cttccccagt 1800  
agctgggacc acaggtgccc gccaccacac ccaactaatt tttgtatttt 1850  
tagtagagac agggtttcac catgttggcc aggctgctct caaaccctg 1900  
acctcaaatg atgtgcctgc ttcagcctcc cacagtgtg ggattacagg 1950  
catgggccac cagcctagc ctcacgctcc tttctgatct tactaagaa 2000  
caaaagaagc agcaacttgc aaggcgggcc tttccactg gtccatctgg 2050  
ttttctctcc aggttcttgc aaaattcctg acgagataag cagttatgtg 2100  
acctcacgtg caaagccacc aacagccact cagaaaagac gcaccagccc 2150  
agaagtgcag aactgcagtc actgcacgtt ttcattctta gggaccagaa 2200  
ccaaaccac cctttctact tccaagactt attttcacat gtggggaggt 2250  
taatctagga atgactcgtt taaggcctat tttcatgatt tctttgtagc 2300  
atgttggtgct tgacgtatta ttgtcctttg attccaaata atatgtttcc 2350  
ttccctcatt gtctggcgtg tctgcgtgga ctggtgacgt gaatcaaat 2400  
catccactga aa 2412

<210> 69

<211> 453

<212> PRT

<213> Homo sapiens

<400> 69

Met	Gly	Glu	Asn	Asp	Pro	Pro	Ala	Val	Glu	Ala	Pro	Phe	Ser	Phe
1				5					10					15

Arg	Ser	Leu	Phe	Gly	Leu	Asp	Asp	Leu	Lys	Ile	Ser	Pro	Val	Ala
				20					25					30

Pro	Asp	Ala	Asp	Ala	Val	Ala	Ala	Gln	Ile	Leu	Ser	Leu	Leu	Pro
				35					40					45

Leu	Lys	Phe	Phe	Pro	Ile	Ile	Val	Ile	Gly	Ile	Ile	Ala	Leu	Ile
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----



	50		55		60
Leu Ala Leu Ala Ile Gly Leu Gly Ile His Phe Asp Cys Ser Gly	65		70		75
Lys Tyr Arg Cys Arg Ser Ser Phe Lys Cys Ile Glu Leu Ile Ala	80		85		90
Arg Cys Asp Gly Val Ser Asp Cys Lys Asp Gly Glu Asp Glu Tyr	95		100		105
Arg Cys Val Arg Val Gly Gly Gln Asn Ala Val Leu Gln Val Phe	110		115		120
Thr Ala Ala Ser Trp Lys Thr Met Cys Ser Asp Asp Trp Lys Gly	125		130		135
His Tyr Ala Asn Val Ala Cys Ala Gln Leu Gly Phe Pro Ser Tyr	140		145		150
Val Ser Ser Asp Asn Leu Arg Val Ser Ser Leu Glu Gly Gln Phe	155		160		165
Arg Glu Glu Phe Val Ser Ile Asp His Leu Leu Pro Asp Asp Lys	170		175		180
Val Thr Ala Leu His His Ser Val Tyr Val Arg Glu Gly Cys Ala	185		190		195
Ser Gly His Val Val Thr Leu Gln Cys Thr Ala Cys Gly His Arg	200		205		210
Arg Gly Tyr Ser Ser Arg Ile Val Gly Gly Asn Met Ser Leu Leu	215		220		225
Ser Gln Trp Pro Trp Gln Ala Ser Leu Gln Phe Gln Gly Tyr His	230		235		240
Leu Cys Gly Gly Ser Val Ile Thr Pro Leu Trp Ile Ile Thr Ala	245		250		255
Ala His Cys Val Tyr Asp Leu Tyr Leu Pro Lys Ser Trp Thr Ile	260		265		270
Gln Val Gly Leu Val Ser Leu Leu Asp Asn Pro Ala Pro Ser His	275		280		285
Leu Val Glu Lys Ile Val Tyr His Ser Lys Tyr Lys Pro Lys Arg	290		295		300
Leu Gly Asn Asp Ile Ala Leu Met Lys Leu Ala Gly Pro Leu Thr	305		310		315
Phe Asn Glu Met Ile Gln Pro Val Cys Leu Pro Asn Ser Glu Glu	320		325		330
Asn Phe Pro Asp Gly Lys Val Cys Trp Thr Ser Gly Trp Gly Ala					

	335	340	345
Thr Glu Asp Gly Gly Asp Ala Ser Pro Val Leu Asn His Ala Ala	350	355	360
Val Pro Leu Ile Ser Asn Lys Ile Cys Asn His Arg Asp Val Tyr	365	370	375
Gly Gly Ile Ile Ser Pro Ser Met Leu Cys Ala Gly Tyr Leu Thr	380	385	390
Gly Gly Val Asp Ser Cys Gln Gly Asp Ser Gly Gly Pro Leu Val	395	400	405
Cys Gln Glu Arg Arg Leu Trp Lys Leu Val Gly Ala Thr Ser Phe	410	415	420
Gly Ile Gly Cys Ala Glu Val Asn Lys Pro Gly Val Tyr Thr Arg	425	430	435
Val Thr Ser Phe Leu Asp Trp Ile His Glu Gln Met Glu Arg Asp	440	445	450

Leu Lys Thr

<210> 70

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 70

tgacatcgcc cttatgaagc tggc 24

<210> 71

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 71

tacacgtccc tgtggttgca gatc 24

<210> 72

<211> 50

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 72

cgttcaatgc agaaatgac cagcctgtgt gcctgcccaa ctctgaagag 50

<210> 73

<211> 3305

<212> DNA

<213> Homo sapiens

<400> 73

cccacgcgtc cgtcctagtc cccgggccaa ctccgacagt ttgctcattt 50  
attgcaacgg tcaaggctgg cttgtgccag aacggcgcg cgcgcgcgac 100  
gcacgcacac acacgggggg aaactttttt aaaaatgaaa ggctagaaga 150  
gtcagcgggc ggcgcgggcg ctgcgcgagg gtcgcggagc tgactcgccg 200  
aggcaggaaa tccctccggt cgcgacgccc ggccccggct cggcgccccg 250  
gtgggatggt gcagcgctcg ccgcggggcc cgagagctgc tgactgaag 300  
gccggcgacg atggcagcgc gcccgctgcc cgtgtcccc gcccgcgccc 350  
tcctgctcgc cctggccggt gctctgctcg cgccctgcga ggcccgaggg 400  
gtgagcttat ggaaccaagg aagagctgat gaagttgtca gtgcctctgt 450  
tcggagtggg gacctctgga tcccagtga gagcttcgac tccaagaatc 500  
atccagaagt gctgaatatt cgactacaac gggaaagcaa agaactgac 550  
ataaatctgg aaagaaatga aggtctcatt gccagcagtt tcacggaaac 600  
ccactatctg caagacggtg ctgatgtctc cctcgctcga aattacacgg 650  
gtcactgtta ctacatgga catgtacggg gatattctga ttcagcagtc 700  
agtctcagca cgtgttctgg tctcagggga cttattgtgt ttgaaaatga 750  
aagctatgtc ttagaaccaa tgaaaagtgc aaccaacaga taaaaactct 800  
tcccagcgaa gaagctgaaa agcgtccggg gatcatgtgg atcacatcac 850  
aacacaccaa acctcgctgc aaagaatgtg tttccaccac cctctcagac 900  
atgggcaaga aggcataaaa gagagaccct caaggcaact aagtatgtgg 950  
agctggtgat cgtggcagac aaccgagagt ttcagaggca aggaaaagat 1000  
ctggaaaaag ttaagcagcg attaatagag attgctaata acgttgacaa 1050  
gttttacaga cactgaaca ttcggatcgt gttggtaggc gtggaagtgt 1100  
ggaatgacat ggacaaatgc tctgtaagtc aggaccatt caccagcctc 1150  
catgaatttc tgactggag gaagatgaag cttctacctc gcaaatccca 1200  
tgacaatgcg cagcttgtca gtgggggtta tttccaagg accaccatcg 1250

gcatggcccc aatcatgagc atgtgcacgg cagaccagtc tgggggaatt 1300  
gtcatggacc attcagacaa tccccttggt gcagccgtga ccctggcaca 1350  
tgagctgggc cacaatttcg ggatgaatca tgacacactg gacaggggct 1400  
gtagctgtca aatggcggtt gagaaaggag gctgcatcat gaacgcttcc 1450  
accgggtacc catttcccat ggtgttcagc agttgcagca ggaaggactt 1500  
ggagaccagc ctggagaaag gaatgggggt gtgcctgttt aacctgccgg 1550  
aagtcaggga gtctttcggg ggccagaagt gtgggaacag atttgtggaa 1600  
gaaggagagg agtgtgactg tggggagcca gaggaatgta tgaatcgctg 1650  
ctgcaatgcc accacctgta ccctgaagcc ggacgctgtg tgcgcacatg 1700  
ggctgtgctg tgaagactgc cagctgaagc ctgcaggaac agcgtgcagg 1750  
gactccagca actcctgtga cctcccagag ttctgcacag gggccagccc 1800  
tactgcccc gccaatgtgt acctgcacga tgggcaactca tgtcaggatg 1850  
tggacggcta ctgctacaat ggcatctgcc agactcacga gcagcagtgt 1900  
gtcacgctct ggggaccagg tgctaaacct gccctggga tctgctttga 1950  
gagagtcaat tctgcagggtg atccttatgg caactgtggc aaagtctcga 2000  
agagttcctt tgccaaatgc gagatgagag atgctaaatg tggaaaaatc 2050  
cagtgtcaag gaggtgccag ccggccagtc attggtacca atgccgtttc 2100  
catagaaaca aacatccctc tgcagcaagg aggccggatt ctgtgccggg 2150  
ggaccacgt gtacttgggc gatgacatgc cggacccagg gcttgtgctt 2200  
gcaggcacia agtgtgcaga tggaaaaatc tgcctgaatc gtcaatgtca 2250  
aaatattagt gtctttggg ttcacgagtg tgcaatgcag tgccacggca 2300  
gaggggtgtg caacaacagg aagaactgcc actgcgaggc cactgggca 2350  
cctcccttct gtgacaagtt tggctttgga ggaagcacag acagcggccc 2400  
catccggcaa gcagaagcaa ggcaggaagc tgcagagtcc aacagggagc 2450  
gcggccaggg ccaggagccc gtgggatgcg aggagcatgc gtctactgcc 2500  
tactgacac tcactgagc cctcccatga catggagacc gtgaccagtg 2550  
ctgtgcaga ggaggtcacg cgtccccaag gcctcctgtg actggcagca 2600  
ttgactctgt ggctttgcca tcgtttccat gacaacagac acaacacagt 2650

tctcggggct caggagggga agtccagcct accaggcacg tctgcagaaa 2700  
cagtgcgaag aagggcagcg acttcctggg tgagcttctg ctaaaacatg 2750  
gacatgcttc agtgctgctc ctgagagagt agcaggttac cactctggca 2800  
ggccccagcc ctgcagcaag gaggaagagg actcaaaagt ctggcctttc 2850  
actgagcctc cacagcagtg ggggagaagc aagggttggg cccagtgtcc 2900  
cctttcccca gtgacacctc agccttggca gccctgatga ctggtctctg 2950  
gctgcaactt aatgctctga tatggctttt agcatttatt atatgaaaat 3000  
agcagggttt tagtttttaa tttatcagag accctgccac ccattccatc 3050  
tccatccaag caaactgaat ggcaatgaaa caaactggag aagaaggtag 3100  
gagaaagggc ggtgaactct ggctctttgc tgtggacatg cgtgaccagc 3150  
agtactcagg tttagagggtt tgcagaaagc cagggaaccc acagagtcac 3200  
caacccttca tttacaagat aagaatgta aaaagtgaac acaatgtaag 3250  
agcctaactc catcccccggt ggccattact gcataaaata gagtgcattt 3300  
gaaat 3305

<210> 74

<211> 735

<212> PRT

<213> Homo sapiens

<400> 74

Met	Ala	Ala	Arg	Pro	Leu	Pro	Val	Ser	Pro	Ala	Arg	Ala	Leu	Leu	1	5	10	15
Leu	Ala	Leu	Ala	Gly	Ala	Leu	Leu	Ala	Pro	Cys	Glu	Ala	Arg	Gly	20	25	30	
Val	Ser	Leu	Trp	Asn	Gln	Gly	Arg	Ala	Asp	Glu	Val	Val	Ser	Ala	35	40	45	
Ser	Val	Arg	Ser	Gly	Asp	Leu	Trp	Ile	Pro	Val	Lys	Ser	Phe	Asp	50	55	60	
Ser	Lys	Asn	His	Pro	Glu	Val	Leu	Asn	Ile	Arg	Leu	Gln	Arg	Glu	65	70	75	
Ser	Lys	Glu	Leu	Ile	Ile	Asn	Leu	Glu	Arg	Asn	Glu	Gly	Leu	Ile	80	85	90	
Ala	Ser	Ser	Phe	Thr	Glu	Thr	His	Tyr	Leu	Gln	Asp	Gly	Thr	Asp	95	100	105	
Val	Ser	Leu	Ala	Arg	Asn	Tyr	Thr	Gly	His	Cys	Tyr	Tyr	His	Gly	110	115	120	

His Val Arg Gly Tyr Ser Asp Ser Ala Val Ser Leu Ser Thr Cys	125	130	135
Ser Gly Leu Arg Gly Leu Ile Val Phe Glu Asn Glu Ser Tyr Val	140	145	150
Leu Glu Pro Met Lys Ser Ala Thr Asn Arg Tyr Lys Leu Phe Pro	155	160	165
Ala Lys Lys Leu Lys Ser Val Arg Gly Ser Cys Gly Ser His His	170	175	180
Asn Thr Pro Asn Leu Ala Ala Lys Asn Val Phe Pro Pro Pro Ser	185	190	195
Gln Thr Trp Ala Arg Arg His Lys Arg Glu Thr Leu Lys Ala Thr	200	205	210
Lys Tyr Val Glu Leu Val Ile Val Ala Asp Asn Arg Glu Phe Gln	215	220	225
Arg Gln Gly Lys Asp Leu Glu Lys Val Lys Gln Arg Leu Ile Glu	230	235	240
Ile Ala Asn His Val Asp Lys Phe Tyr Arg Pro Leu Asn Ile Arg	245	250	255
Ile Val Leu Val Gly Val Glu Val Trp Asn Asp Met Asp Lys Cys	260	265	270
Ser Val Ser Gln Asp Pro Phe Thr Ser Leu His Glu Phe Leu Asp	275	280	285
Trp Arg Lys Met Lys Leu Leu Pro Arg Lys Ser His Asp Asn Ala	290	295	300
Gln Leu Val Ser Gly Val Tyr Phe Gln Gly Thr Thr Ile Gly Met	305	310	315
Ala Pro Ile Met Ser Met Cys Thr Ala Asp Gln Ser Gly Gly Ile	320	325	330
Val Met Asp His Ser Asp Asn Pro Leu Gly Ala Ala Val Thr Leu	335	340	345
Ala His Glu Leu Gly His Asn Phe Gly Met Asn His Asp Thr Leu	350	355	360
Asp Arg Gly Cys Ser Cys Gln Met Ala Val Glu Lys Gly Gly Cys	365	370	375
Ile Met Asn Ala Ser Thr Gly Tyr Pro Phe Pro Met Val Phe Ser	380	385	390
Ser Cys Ser Arg Lys Asp Leu Glu Thr Ser Leu Glu Lys Gly Met	395	400	405

Gly Val Cys Leu Phe Asn Leu Pro Glu Val Arg Glu Ser Phe Gly	410	415	420
Gly Gln Lys Cys Gly Asn Arg Phe Val Glu Glu Gly Glu Glu Cys	425	430	435
Asp Cys Gly Glu Pro Glu Glu Cys Met Asn Arg Cys Cys Asn Ala	440	445	450
Thr Thr Cys Thr Leu Lys Pro Asp Ala Val Cys Ala His Gly Leu	455	460	465
Cys Cys Glu Asp Cys Gln Leu Lys Pro Ala Gly Thr Ala Cys Arg	470	475	480
Asp Ser Ser Asn Ser Cys Asp Leu Pro Glu Phe Cys Thr Gly Ala	485	490	495
Ser Pro His Cys Pro Ala Asn Val Tyr Leu His Asp Gly His Ser	500	505	510
Cys Gln Asp Val Asp Gly Tyr Cys Tyr Asn Gly Ile Cys Gln Thr	515	520	525
His Glu Gln Gln Cys Val Thr Leu Trp Gly Pro Gly Ala Lys Pro	530	535	540
Ala Pro Gly Ile Cys Phe Glu Arg Val Asn Ser Ala Gly Asp Pro	545	550	555
Tyr Gly Asn Cys Gly Lys Val Ser Lys Ser Ser Phe Ala Lys Cys	560	565	570
Glu Met Arg Asp Ala Lys Cys Gly Lys Ile Gln Cys Gln Gly Gly	575	580	585
Ala Ser Arg Pro Val Ile Gly Thr Asn Ala Val Ser Ile Glu Thr	590	595	600
Asn Ile Pro Leu Gln Gln Gly Gly Arg Ile Leu Cys Arg Gly Thr	605	610	615
His Val Tyr Leu Gly Asp Asp Met Pro Asp Pro Gly Leu Val Leu	620	625	630
Ala Gly Thr Lys Cys Ala Asp Gly Lys Ile Cys Leu Asn Arg Gln	635	640	645
Cys Gln Asn Ile Ser Val Phe Gly Val His Glu Cys Ala Met Gln	650	655	660
Cys His Gly Arg Gly Val Cys Asn Asn Arg Lys Asn Cys His Cys	665	670	675
Glu Ala His Trp Ala Pro Pro Phe Cys Asp Lys Phe Gly Phe Gly	680	685	690

Gly	Ser	Thr	Asp	Ser	Gly	Pro	Ile	Arg	Gln	Ala	Glu	Ala	Arg	Gln
				695					700					705
Glu	Ala	Ala	Glu	Ser	Asn	Arg	Glu	Arg	Gly	Gln	Gly	Gln	Glu	Pro
				710					715					720
Val	Gly	Ser	Gln	Glu	His	Ala	Ser	Thr	Ala	Ser	Leu	Thr	Leu	Ile
				725					730					735

<210> 75

<211> 483

<212> DNA

<213> Homo sapiens

<220>

<221> unsure

<222> 30, 94, 143, 156, 163, 179, 193, 369, 371, 381, 390, 473

<223> unknown base

<400> 75

```

tccaaggt tcttgatgg cagatgattn tggggttttg cattgtttcc 50
ctgacaacga aaacaaaaca gttttggggg ttcaggaggg gaantccagc 100
ctaccaggga agtttgcaga aacagtgcaa ggaagggcag ganttcctgg 150
ttgagntttt tgntaaaaca tggacatgnt tcagtgctgc tcntgagaga 200
gtagcaggtt accacttttg gcaggcccca gccctgcagc aaggaggaag 250
aggactcaaa agtttggcct ttcactgagc ctccacagca gtggggggaga 300
agcaagggtt gggcccagtg tcccctttcc ccagtgcac ctcagccttg 350
gcagccctga taactggtnt ntggctgcaa nttaatgctn tgatatggct 400
tttagcattt attatatgaa aatagcaggg ttttagtttt taatttatca 450
gagaccctgc caccattcc atntccatcc aag 483

```

<210> 76

<211> 27

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 76

```

gtctcagcac gtgttctggt ctcagg 27

```

<210> 77

<211> 18

<212> DNA

<213> Artificial Sequence



<220>  
<223> Synthetic oligonucleotide probe

<400> 77  
catgagcatg tgcacggc 18

<210> 78  
<211> 18  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 78  
tacctgcacg atgggcac 18

<210> 79  
<211> 18  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 79  
cactgggcac ctcccttc 18

<210> 80  
<211> 26  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 80  
ctccaggctg gtctccaagt ccttcc 26

<210> 81  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 81  
tccctgttgg actctgcagc ttcc 24

<210> 82  
<211> 19  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 82  
cttcgctggg aagagtttg 19

<210> 83  
<211> 50  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 83  
gtgcaaccaa cagatacaaa ctcttcccag cgaagaagct gaaaagcgtc 50

<210> 84  
<211> 1714  
<212> DNA  
<213> Homo sapiens

<400> 84  
catcctgcaa catggtgaaa ccacgcctgg ctaattttgt tgtatttttg 50  
gtagagatgg gatttcaccg tgtagccag gattgtctca atctgacctc 100  
atgatctgcc cgcctcggcc tcccaaagtg ctgggattac aggcgagtgc 150  
aaccacaccc ggccacaaac tttttaagaa gttaatgaaa ccataccttt 200  
tacattttta atgacaggaa aatgctcaca ataattgtta acccaaaatt 250  
ctggatacaa aagtacaatc ttactgtgt aaatacatgt atatgtacta 300  
tatgaaaata taccaaatat caataatact tatctctggg taaaaacctc 350  
ttctcatacc ctgtgctaac aacttttaac aaaaaatttg catcactttt 400  
aagaatcaag aaaaatttct gaaggtcata tgggacagaa aaaaaacca 450  
agggaaaaat cagccactt gggaaaaaaa gattcgaaat ctgccttttt 500  
atagatttgt aattaataag gtccaggctt tctaagcaac ttaaatgttt 550  
tgtttcgaaa caaagtactt gtctggatgt aggaggaaag ggagtgatgt 600  
cactgccatt atgatgcccc ttgaatataa gaccctactt gctatctccc 650  
ctgcaccagc caggagccac ccatcctcca gcacactgag cagcaagctg 700  
gacacacggc aactgatcc aaatgggtaa ggggatggg gcatgtctca 750  
ttctgggtct gctacttctg gcgctgctcc taccctgca ggtttcttca 800  
tttgttcctt taaccagtat gccggaagct actgcagccg aaaccacaaa 850  
gccctccaac agtgccttac agcctacagc cggctctcctt gtggtcttgc 900

ttgcccttct acatctctac cattaagagg caggtcaaga aacagctaca 950  
 gttctccaac ccatacacta aaaccgaatc caaatgggtgc ctagaagttc 1000  
 aatgtggcaa ggaaaaaaac caggtcttca tcaaactctac taatttcaact 1050  
 ccttattaac agagaaaacgc ttgagagtct caaactggac tggtttaaag 1100  
 agcatctgaa ggatttgact agatgataaa tgccgtgtact cccagtactt 1150  
 tgggaggcct aggcggcgcg atcacctgag gtcaggagtt tgagactaac 1200  
 ctggccaaaa tggtgaaacc ccactgttac taaaaataca aatattgact 1250  
 gggcgtggtg gtgagtgcct gtgatcccag ctactcaggt ggctgaagca 1300  
 ggacaatcac ttgaactcag gaggcagagg ttgcagtgag ctgagatcgc 1350  
 gctactgcac tctagcctag cctgggcaac agagtgagac ttcgtctcaa 1400  
 aaaaaaaaaa gccaaagtga gtggctcacg cctgtaatcc cggcactttg 1450  
 ggaggccgag gtggggcgat cacgaggcca ggagatcaag accatcctgg 1500  
 ctaatacagt gaaaccctgt ctctactaaa aatacaaaaa attagccggg 1550  
 gatggtggca ggcacctgga gtcccagcta ctcgggagggc tgaggcagga 1600  
 gaatagcgtg aactcaggag gcgagccttg cagtgaagcc agattgcgct 1650  
 actgcactcc agcctggggc acagcgcgag actccgtctc aaaaaaaaaa 1700  
 aaaaaaaaaa aaaa 1714

<210> 85

<211> 67

<212> PRT

<213> Homo sapiens

<400> 85

Met	Gly	Lys	Gly	Met	Val	Ala	Met	Leu	Ile	Leu	Gly	Leu	Leu	Leu
1				5				10						15

Leu	Ala	Leu	Leu	Leu	Pro	Val	Gln	Val	Ser	Ser	Phe	Val	Pro	Leu
				20					25					30

Thr	Ser	Met	Pro	Glu	Ala	Thr	Ala	Ala	Glu	Thr	Thr	Lys	Pro	Ser
				35					40					45

Asn	Ser	Ala	Leu	Gln	Pro	Thr	Ala	Gly	Leu	Leu	Val	Val	Leu	Leu
				50					55					60

Ala	Leu	Leu	His	Leu	Tyr	His
				65		

<210> 86

<211> 23

<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 86  
acgggcacac tggatcccaa atg 23

<210> 87  
<211> 29  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 87  
ggtagagatg tagaaggga agcaagacc 29

<210> 88  
<211> 50  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 88  
gtccctacc cgtgcaggtt tttcatttg ttcctttaac cagtatgccg 50

<210> 89  
<211> 2956  
<212> DNA  
<213> Homo sapiens

<400> 89  
gccgcggcga gagcgcgcc agccccgccg cgatgccgc gcgccagga 50  
cgcctcctcc cgtgctggc ccggccggcg gccctgactg cgtgctgct 100  
gctgctgctg ggccatggcg gcggcggcg ctggggcgcc cgggccagg 150  
aggcggcggc ggcgggcgcg gacgggcccc ccgcggcaga cggcgaggac 200  
ggacaggacc cgcacagcaa gcacctgtac acggccgaca tgttcacgca 250  
cgggatccag agcgcgcgc acttcgtcat gttcttcgcg cctggtgtg 300  
gacactgcca ggggctgcag ccgacttga atgacctggg agacaaatac 350  
aacagcatgg aagatgcaa agtctatgtg gctaaagtgg actgcacggc 400  
ccactccgac gtgtgctccg ccaggggggt gcgaggatac cccaccttaa 450  
agcttttcaa gccaggccaa gaagctgtga agtaccaggg tcctcgggac 500

ttccagacac tggaaaactg gatgctgcag aactgaacg aggagccagt 550  
gacaccagag ccggaagtgg aaccgcccag tgcccccgag ctcaagcaag 600  
ggctgtatga gctctcagca agcaactttg agctgcacgt tgcacaaggc 650  
gaccacttta tcaagttctt cgctccgtgg tgtggtcact gcaaagccct 700  
ggctccaacc tgggagcagc tggctctggg ccttgaacat tccgaaactg 750  
tcaagattgg caaggttgat tgtacacagc actatgaact ctgctccgga 800  
aaccagggtt gtggctatcc cactcttctc tggttccgag atgggaaaaa 850  
ggtggtatcag tacaaggga agcggtattt ggagtcactg agggagtacg 900  
tggagtcgca gctgcagcgc acagagactg gagcgacgga gaccgtcacg 950  
ccctcagagg ccccggtgct ggagctgag cccgaggctg acaagggcac 1000  
tgtgttggca ctactgaaa ataacttcga tgacaccatt gcagaaggaa 1050  
taaccttcat caagttttat gctccatggt gtggtcattg taagactctg 1100  
gctcctactt gggaggaact ctctaaaaag gaattccctg gtctggcggg 1150  
ggtcaagatc gccgaagtag actgactgc tgaacggaat atctgcagca 1200  
agtattcggg acgaggctac cccacgttat tgcttttccg aggagggaag 1250  
aaagtcagtg agcacagtgg aggcagagac cttgactcgt tacaccgctt 1300  
tgtcctgagc caagcgaaag acgaacttta ggaacacagt tggaggtcac 1350  
ctctcctgcc cagctcccgc accctgcgtt taggagttca gtcccacaga 1400  
ggccactggg ttcccagtgg tggctgttca gaaagcagaa catactaagc 1450  
gtgaggtatc ttctttgtgt gtgtgttttc caagccaaca cactctacag 1500  
attctttatt aagttaagtt tctctaagta aatgtgtaac tcatggtcac 1550  
tgtgtaaaca ttttcagtgg cgatatatcc cctttgacct tctcttgatg 1600  
aaatttacat ggtttccttt gagactaaaa tagcgttgag ggaaatgaaa 1650  
ttgctggact atttgtggct cctgagttga gtgattttgg tgaaagaaag 1700  
cacatccaaa gcatagttta cctgcccacg agttctggaa aggtggcctt 1750  
gtggcagtat tgacgttcct ctgatcttaa ggtcacagtt gactcaatac 1800  
tgtgttggtc cgtagcatgg agcagattga aatgcaaaaa cccacacctc 1850  
tggaagatac cttcacggcc gctgctggag cttctgttgc tgtgaatact 1900  
tctctcagtg tgagaggtta gccgtgatga aagcagcgtt acttctgacc 1950

gtgcctgagt aagagaatgc tgatgccata actttatgtg tcgatacttg 2000  
 tcaaatacagt tactgttcag gggatccttc tgtttctcac ggggtgaaac 2050  
 atgtcttttag ttctcatgt taacacgaag ccagagccca catgaactgt 2100  
 tggatgtcct ccttagaaaag ggtaggcatg gaaaattcca cgaggctcat 2150  
 tctcagatc tcattaactc attgaaagat tccagttgta tttgtcacct 2200  
 ggggtgacaa gaccagacag gctttcccag gcctgggtat ccaggaggagc 2250  
 tctgcagccc tgctgaaggg ccctaactag agttctagag tttctgattc 2300  
 tgtttctcag tagtcctttt agaggcttgc tatacttggg ctgcttcaag 2350  
 gaggtcgacc ttctaatagt tgaagaatgg gatgcatttg atctcaagac 2400  
 caaagacaga tgcagtgagg ctgctctggc cctgggtgtg acggctgtgg 2450  
 cagctgttga tgccagtgtc ctctaactca tgctgtcctt gtgattaaac 2500  
 acctctatct cccttgggaa taagcacata caggcttaag ctctaagata 2550  
 gataggtgtt tgtcctttta ccatcgagct acttcccata ataaccactt 2600  
 tgcattcaac actcttcacc cacctcccat acgcaagggg atgtggatac 2650  
 ttggcccaaa gtaactggtg gtaggaatct tagaacaag accacttata 2700  
 ctgtctgtct gaggcagaag ataacagcag catctcgacc agcctctgcc 2750  
 ttaaaggaaa tctttattaa tcacgtatgg ttcacagata attctttttt 2800  
 taaaaaaacc caacctccta gagaagcaca actgtcaaga gtcttgtaca 2850  
 cacaacttca gctttgcac acgagtcttg tattccaaga aaatcaaagt 2900  
 ggtacaattt gtttgtttac actatgatac tttctaaata aactcttttt 2950  
 ttttaa 2956

<210> 90

<211> 432

<212> PRT

<213> Homo sapiens

<400> 90

Met	Pro	Ala	Arg	Pro	Gly	Arg	Leu	Leu	Pro	Leu	Leu	Ala	Arg	Pro
1				5					10					15

Ala	Ala	Leu	Thr	Ala	Leu	Leu	Leu	Leu	Leu	Gly	His	Gly	Gly
				20					25				30

Gly	Gly	Arg	Trp	Gly	Ala	Arg	Ala	Gln	Glu	Ala	Ala	Ala	Ala	Ala
				35					40					45

Ala Asp Gly Pro	Pro Ala Ala Asp Gly	Glu Asp Gly Gln Asp	Pro
50		55	60
His Ser Lys His	Leu Tyr Thr Ala Asp	Met Phe Thr His Gly	Ile
65		70	75
Gln Ser Ala Ala	His Phe Val Met Phe	Phe Ala Pro Trp Cys	Gly
80		85	90
His Cys Gln Arg	Leu Gln Pro Thr Trp	Asn Asp Leu Gly Asp	Lys
95		100	105
Tyr Asn Ser Met	Glu Asp Ala Lys Val	Tyr Val Ala Lys Val	Asp
110		115	120
Cys Thr Ala His	Ser Asp Val Cys Ser	Ala Gln Gly Val Arg	Gly
125		130	135
Tyr Pro Thr Leu	Lys Leu Phe Lys Pro	Gly Gln Glu Ala Val	Lys
140		145	150
Tyr Gln Gly Pro	Arg Asp Phe Gln Thr	Leu Glu Asn Trp Met	Leu
155		160	165
Gln Thr Leu Asn	Glu Glu Pro Val Thr	Pro Glu Pro Glu Val	Glu
170		175	180
Pro Pro Ser Ala	Pro Glu Leu Lys Gln	Gly Leu Tyr Glu Leu	Ser
185		190	195
Ala Ser Asn Phe	Glu Leu His Val Ala	Gln Gly Asp His Phe	Ile
200		205	210
Lys Phe Phe Ala	Pro Trp Cys Gly His	Cys Lys Ala Leu Ala	Pro
215		220	225
Thr Trp Glu Gln	Leu Ala Leu Gly Leu	Glu His Ser Glu Thr	Val
230		235	240
Lys Ile Gly Lys	Val Asp Cys Thr Gln	His Tyr Glu Leu Cys	Ser
245		250	255
Gly Asn Gln Val	Arg Gly Tyr Pro Thr	Leu Leu Trp Phe Arg	Asp
260		265	270
Gly Lys Lys Val	Asp Gln Tyr Lys Gly	Lys Arg Asp Leu Glu	Ser
275		280	285
Leu Arg Glu Tyr	Val Glu Ser Gln Leu	Gln Arg Thr Glu Thr	Gly
290		295	300
Ala Thr Glu Thr	Val Thr Pro Ser Glu	Ala Pro Val Leu Ala	Ala
305		310	315
Glu Pro Glu Ala	Asp Lys Gly Thr Val	Leu Ala Leu Thr Glu	Asn
320		325	330

Asn	Phe	Asp	Asp	Thr	Ile	Ala	Glu	Gly	Ile	Thr	Phe	Ile	Lys	Phe
				335					340					345
Tyr	Ala	Pro	Trp	Cys	Gly	His	Cys	Lys	Thr	Leu	Ala	Pro	Thr	Trp
				350					355					360
Glu	Glu	Leu	Ser	Lys	Lys	Glu	Phe	Pro	Gly	Leu	Ala	Gly	Val	Lys
				365					370					375
Ile	Ala	Glu	Val	Asp	Cys	Thr	Ala	Glu	Arg	Asn	Ile	Cys	Ser	Lys
				380					385					390
Tyr	Ser	Val	Arg	Gly	Tyr	Pro	Thr	Leu	Leu	Leu	Phe	Arg	Gly	Gly
				395					400					405
Lys	Lys	Val	Ser	Glu	His	Ser	Gly	Gly	Arg	Asp	Leu	Asp	Ser	Leu
				410					415					420
His	Arg	Phe	Val	Leu	Ser	Gln	Ala	Lys	Asp	Glu	Leu			
				425					430					

<210> 91  
 <211> 20  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 91  
 atgttcttcg cgccctggtg 20

<210> 92  
 <211> 21  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 92  
 ccaagccaac acactctaca g 21

<210> 93  
 <211> 24  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 93  
 aagtgtgcgc cttgtgcaac gtgc 24

<210> 94  
 <211> 23



<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 94  
gggtcaaaggg gatatatcgc cac 23

<210> 95  
<211> 49  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 95  
gcatggaaga tgccaaagtc tatgtggcta aagtggactg cacggccca 49

<210> 96  
<211> 1016  
<212> DNA  
<213> Homo sapiens

<400> 96  
cttttctgag gaaccacagc aatgaatggc tttgcatcct tgcttcgaag 50  
aaaccaattt atcctcctgg tactatttct tttgcaaatt cagagtctgg 100  
gtctggatat tgatagccgt cctaccgctg aagtctgtgc cacacacaca 150  
atttcaccag gacccaaagg agatgatggg gaaaaaggag atccaggaga 200  
agaggggaaag catggcaaag tgggacgcat ggggccgaaa ggaattaaag 250  
gagaactggg tgatatggga gatcagggca atattggcaa gactggggcc 300  
attgggaaga agggtgacaa aggggaaaaa ggtttgcttg gaatacctgg 350  
agaaaaaggc aaagcaggta ctgtctgtga ttgtggaaga taccggaaat 400  
ttgttggaaca actggatatt agtattgctc ggctcaagac atctatgaag 450  
tttgtcaaga atgtgatagc agggattagg gaaactgaag agaaattcta 500  
ctacatcgtg caggaagaga agaactacag ggaatcccta acccactgca 550  
ggattcgggg tggaatgcta gccatgccca aggatgaagc tgccaacaca 600  
ctcatcgctg actatgttgc caagagtggc ttctttcggg tgttcattgg 650  
cgtgaatgac cttgaaaggg agggacagta catgtccaca gacaacactc 700  
cactgcagaa ctatagcaac tggaatgagg gggaaccag cgaccctat 750  
ggatcatgagg actgtgtgga gatgctgagc tctggcagat ggaatgacac 800

agagtgccat cttaccatgt actttgtctg tgagttcatc aagaagaaaa 850  
 agtaacttcc ctcatcctac gtatttgcta ttttctgtg accgtcatta 900  
 cagttattgt tatccatcct ttttttctg attgtactac atttgatctg 950  
 agtcaacata gctagaaaat gctaaactga ggtatggagc ctccatcatc 1000  
 aaaaaaaaaa aaaaaa 1016

<210> 97  
 <211> 277  
 <212> PRT  
 <213> Homo sapiens

<400> 97

Met	Asn	Gly	Phe	Ala	Ser	Leu	Leu	Arg	Arg	Asn	Gln	Phe	Ile	Leu
1				5					10					15
Leu	Val	Leu	Phe	Leu	Leu	Gln	Ile	Gln	Ser	Leu	Gly	Leu	Asp	Ile
				20					25					30
Asp	Ser	Arg	Pro	Thr	Ala	Glu	Val	Cys	Ala	Thr	His	Thr	Ile	Ser
				35					40					45
Pro	Gly	Pro	Lys	Gly	Asp	Asp	Gly	Glu	Lys	Gly	Asp	Pro	Gly	Glu
				50					55					60
Glu	Gly	Lys	His	Gly	Lys	Val	Gly	Arg	Met	Gly	Pro	Lys	Gly	Ile
				65					70					75
Lys	Gly	Glu	Leu	Gly	Asp	Met	Gly	Asp	Gln	Gly	Asn	Ile	Gly	Lys
				80					85					90
Thr	Gly	Pro	Ile	Gly	Lys	Lys	Gly	Asp	Lys	Gly	Glu	Lys	Gly	Leu
				95					100					105
Leu	Gly	Ile	Pro	Gly	Glu	Lys	Gly	Lys	Ala	Gly	Thr	Val	Cys	Asp
				110					115					120
Cys	Gly	Arg	Tyr	Arg	Lys	Phe	Val	Gly	Gln	Leu	Asp	Ile	Ser	Ile
				125					130					135
Ala	Arg	Leu	Lys	Thr	Ser	Met	Lys	Phe	Val	Lys	Asn	Val	Ile	Ala
				140					145					150
Gly	Ile	Arg	Glu	Thr	Glu	Glu	Lys	Phe	Tyr	Tyr	Ile	Val	Gln	Glu
				155					160					165
Glu	Lys	Asn	Tyr	Arg	Glu	Ser	Leu	Thr	His	Cys	Arg	Ile	Arg	Gly
				170					175					180
Gly	Met	Leu	Ala	Met	Pro	Lys	Asp	Glu	Ala	Ala	Asn	Thr	Leu	Ile
				185					190					195
Ala	Asp	Tyr	Val	Ala	Lys	Ser	Gly	Phe	Phe	Arg	Val	Phe	Ile	Gly

	200	205	210
Val Asn Asp Leu Glu Arg Glu Gly Gln Tyr Met Ser Thr Asp Asn			
	215	220	225
Thr Pro Leu Gln Asn Tyr Ser Asn Trp Asn Glu Gly Glu Pro Ser			
	230	235	240
Asp Pro Tyr Gly His Glu Asp Cys Val Glu Met Leu Ser Ser Gly			
	245	250	255
Arg Trp Asn Asp Thr Glu Cys His Leu Thr Met Tyr Phe Val Cys			
	260	265	270
Glu Phe Ile Lys Lys Lys Lys			
	275		

<210> 98

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 98

cgctgactat gttgccaaga gtgg 24

<210> 99

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 99

gatgatggag gctccatacc tcag 24

<210> 100

<211> 50

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 100

gtgttcattg gcgtgaatga ccttgaaagg gagggacagt acatgttcac 50

<210> 101

<211> 2574

<212> DNA

<213> Homo sapiens

<400> 101

ggttctatcg attcgaattc ggccacactg gccggatcct ctagagatcc 50

ctcgacctcg acccacgcgt ccgctgctct ccgcccgtgt ggagtggtag 100  
gggcctgggt gggaatgggc gtgtgccagc gcacgcgcgc tccctggaag 150  
gagaagtctc agctagaacg agcggcccta ggttttcgga agggaggatc 200  
agggatgttt gcgagcggct ggaaccagac ggtgccgata gaggaagcgg 250  
gctccatggc tgccctcctg ctgctgcccc tgctgctgtt gctaccgctg 300  
ctgctgctga agctacacct ctggccgcag ttgcgctggc ttccggcgga 350  
cttggccttt gcggtgcgag ctctgtgctg caaaagggct cttcgagctc 400  
gcgccctggc cgcggctgcc gccgaccgg aaggctccga ggggggctgc 450  
agcctggcct gggcctcgc ggaactggcc cagcagcgcg ccgcgcacac 500  
ctttctcatt cacggctcgc ggcgctttag ctactcagag gcggagcgcg 550  
agagtaacag ggctgcacgc gccttcctac gtgcgctagg ctgggactgg 600  
ggacccgacg gcggcgacag cggcgagggg agcgtggag aaggcgagcg 650  
ggcagcgcg ggagccggag atgcagcggc cggaagcggc gcggagttag 700  
ccggagggga cggtgccgcc agaggtggag gagccgcgc cctctgtca 750  
cctggagcaa ctgtggcgt gctcctcccc gctggcccag agtttctgtg 800  
gctctggttc gggctggcca aggccggcct gcgcaactgcc tttgtgcca 850  
ccgccctgcg ccggggcccc ctgctgcaact gcctccgcag ctgcggcgcg 900  
cgcgcgtgg tgctggcgcc agagtttctg gagtccctgg agccggacct 950  
gcccgcctg agagccatgg ggctccacct gtgggctgca ggcccaggaa 1000  
cccaccctgc tggaattagc gatttgctgg ctgaagtgtc cgctgaagtg 1050  
gatgggccag tgccaggata cctctcttcc cccagagca taacagacac 1100  
gtgcctgtac atcttcacct ctggcaccac gggcctcccc aaggtgtc 1150  
ggatcagtca tctgaagatc ctgcaatgcc agggcttcta tcagctgtgt 1200  
ggtgtccacc aggaagatgt gatctacct gccctccac tctaccacat 1250  
gtccggttcc ctgctgggca tcgtgggctg catgggcatt ggggccacag 1300  
tggtgtgaa atccaagttc tcggctgtgc agttctggga agattgccag 1350  
cagcacaggg tgacggtgtt ccagtacatt ggggagctgt gccgatacct 1400  
tgtcaaccag cccccagca aggcagaacg tggccataag gtccggctgg 1450

cagtgggcag cgggctgcgc ccagatacct gggagcggtt tgtgcggcgc 1500  
 ttcgggcccc tgcaggtgct ggagacatat ggactgacag agggcaacgt 1550  
 ggccaccatc aactacacag gacagcgggg cgctgtgggg cgtgcttcct 1600  
 ggctttacaa gcatatcttc cccttctcct tgattcgcta tgatgtcacc 1650  
 acaggagagc caattcggga cccccagggg cactgtatgg ccacatctcc 1700  
 aggtgagcca gggctgctgg tggccccggt aagccagcag tccccattcc 1750  
 tgggctatgc tggcggggcca gagctggccc aggggaagtt gctaaaggat 1800  
 gtcttcgggc ctggggatgt tttcttcaac actggggacc tgctggctctg 1850  
 cgatgaccaa ggTTTTctcc gcttccatga tcgtactgga gacaccttca 1900  
 ggtggaaggg ggagaatgtg gccacaaccg aggtggcaga ggtcttcgag 1950  
 gccctagatt ttcttcagga ggtgaacgtc tatggagtca ctgtgccagg 2000  
 gcatgaaggc agggctggaa tggcagccct agttctgcgt cccccccacg 2050  
 ctttggaacct tatgcagctc tacaccacag tgtctgagaa cttgccacct 2100  
 tatgcccggc ccgattcct caggctccag gagtctttgg ccaccacaga 2150  
 gaccttcaaa cagcagaaag ttcggatggc aaatgagggc ttcgacccca 2200  
 gcacctgtc tgacctactg tacgttctgg accaggctgt aggtgcctac 2250  
 ctgcccctca caactgcccg gtacagcgcc ctctggcag gaaaccttcg 2300  
 aatctgagaa ctccacacc tgaggcacct gagagaggaa ctctgtgggg 2350  
 tgggggccgt tgcaggtgta ctgggctgtc agggatcttt tctataccag 2400  
 aactgcggtc actatTTTgt aataaatgtg gctggagctg atccagctgt 2450  
 ctctgacctc aaaaaaaaaa aaaaaaaaaa aaaaaaaaag ggcggccgcg 2500  
 actctagagt cgacctgcag tagggataac agggtaataa gcttgccgcg 2550  
 catggcccaa cttgtttatt gcag 2574

<210> 102

<211> 730

<212> PRT

<213> Homo sapiens

<400> 102

Met	Gly	Val	Cys	Gln	Arg	Thr	Arg	Ala	Pro	Trp	Lys	Glu	Lys	Ser
1					5				10					15

Gln	Leu	Glu	Arg	Ala	Ala	Leu	Gly	Phe	Arg	Lys	Gly	Gly	Ser	Gly
				20					25					30

Met	Phe	Ala	Ser	Gly	Trp	Asn	Gln	Thr	Val	Pro	Ile	Glu	Glu	Ala		35	40	45
Gly	Ser	Met	Ala	Ala	Leu	Leu	Leu	Leu	Pro	Leu	Leu	Leu	Leu	Leu		50	55	60
Pro	Leu	Leu	Leu	Leu	Lys	Leu	His	Leu	Trp	Pro	Gln	Leu	Arg	Trp		65	70	75
Leu	Pro	Ala	Asp	Leu	Ala	Phe	Ala	Val	Arg	Ala	Leu	Cys	Cys	Lys		80	85	90
Arg	Ala	Leu	Arg	Ala	Arg	Ala	Leu	Ala	Ala	Ala	Ala	Ala	Asp	Pro		95	100	105
Glu	Gly	Pro	Glu	Gly	Gly	Cys	Ser	Leu	Ala	Trp	Arg	Leu	Ala	Glu		110	115	120
Leu	Ala	Gln	Gln	Arg	Ala	Ala	His	Thr	Phe	Leu	Ile	His	Gly	Ser		125	130	135
Arg	Arg	Phe	Ser	Tyr	Ser	Glu	Ala	Glu	Arg	Glu	Ser	Asn	Arg	Ala		140	145	150
Ala	Arg	Ala	Phe	Leu	Arg	Ala	Leu	Gly	Trp	Asp	Trp	Gly	Pro	Asp		155	160	165
Gly	Gly	Asp	Ser	Gly	Glu	Gly	Ser	Ala	Gly	Glu	Gly	Glu	Arg	Ala		170	175	180
Ala	Pro	Gly	Ala	Gly	Asp	Ala	Ala	Ala	Gly	Ser	Gly	Ala	Glu	Phe		185	190	195
Ala	Gly	Gly	Asp	Gly	Ala	Ala	Arg	Gly	Gly	Gly	Ala	Ala	Ala	Pro		200	205	210
Leu	Ser	Pro	Gly	Ala	Thr	Val	Ala	Leu	Leu	Leu	Pro	Ala	Gly	Pro		215	220	225
Glu	Phe	Leu	Trp	Leu	Trp	Phe	Gly	Leu	Ala	Lys	Ala	Gly	Leu	Arg		230	235	240
Thr	Ala	Phe	Val	Pro	Thr	Ala	Leu	Arg	Arg	Gly	Pro	Leu	Leu	His		245	250	255
Cys	Leu	Arg	Ser	Cys	Gly	Ala	Arg	Ala	Leu	Val	Leu	Ala	Pro	Glu		260	265	270
Phe	Leu	Glu	Ser	Leu	Glu	Pro	Asp	Leu	Pro	Ala	Leu	Arg	Ala	Met		275	280	285
Gly	Leu	His	Leu	Trp	Ala	Ala	Gly	Pro	Gly	Thr	His	Pro	Ala	Gly		290	295	300
Ile	Ser	Asp	Leu	Leu	Ala	Glu	Val	Ser	Ala	Glu	Val	Asp	Gly	Pro		305	310	315

Val Pro Gly Tyr	Leu Ser Ser Pro Gln	Ser Ile Thr Asp Thr	Cys
320		325	330
Leu Tyr Ile Phe	Thr Ser Gly Thr Thr	Gly Leu Pro Lys Ala	Ala
335		340	345
Arg Ile Ser His	Leu Lys Ile Leu Gln	Cys Gln Gly Phe Tyr	Gln
350		355	360
Leu Cys Gly Val	His Gln Glu Asp Val	Ile Tyr Leu Ala Leu	Pro
365		370	375
Leu Tyr His Met	Ser Gly Ser Leu Leu	Gly Ile Val Gly Cys	Met
380		385	390
Gly Ile Gly Ala	Thr Val Val Leu Lys	Ser Lys Phe Ser Ala	Gly
395		400	405
Gln Phe Trp Glu	Asp Cys Gln Gln His	Arg Val Thr Val Phe	Gln
410		415	420
Tyr Ile Gly Glu	Leu Cys Arg Tyr Leu	Val Asn Gln Pro Pro	Ser
425		430	435
Lys Ala Glu Arg	Gly His Lys Val Arg	Leu Ala Val Gly Ser	Gly
440		445	450
Leu Arg Pro Asp	Thr Trp Glu Arg Phe	Val Arg Arg Phe Gly	Pro
455		460	465
Leu Gln Val Leu	Glu Thr Tyr Gly Leu	Thr Glu Gly Asn Val	Ala
470		475	480
Thr Ile Asn Tyr	Thr Gly Gln Arg Gly	Ala Val Gly Arg Ala	Ser
485		490	495
Trp Leu Tyr Lys	His Ile Phe Pro Phe	Ser Leu Ile Arg Tyr	Asp
500		505	510
Val Thr Thr Gly	Glu Pro Ile Arg Asp	Pro Gln Gly His Cys	Met
515		520	525
Ala Thr Ser Pro	Gly Glu Pro Gly Leu	Leu Val Ala Pro Val	Ser
530		535	540
Gln Gln Ser Pro	Phe Leu Gly Tyr Ala	Gly Gly Pro Glu Leu	Ala
545		550	555
Gln Gly Lys Leu	Leu Lys Asp Val Phe	Arg Pro Gly Asp Val	Phe
560		565	570
Phe Asn Thr Gly	Asp Leu Leu Val Cys	Asp Asp Gln Gly Phe	Leu
575		580	585
Arg Phe His Asp	Arg Thr Gly Asp Thr	Phe Arg Trp Lys Gly	Glu
590		595	600

Asn Val Ala Thr	Thr Glu Val Ala Glu Val Phe Glu Ala Leu Asp	
	605	610 615
Phe Leu Gln Glu	Val Asn Val Tyr Gly Val Thr Val Pro Gly His	
	620	625 630
Glu Gly Arg Ala	Gly Met Ala Ala Leu Val Leu Arg Pro Pro His	
	635	640 645
Ala Leu Asp Leu	Met Gln Leu Tyr Thr His Val Ser Glu Asn Leu	
	650	655 660
Pro Pro Tyr Ala	Arg Pro Arg Phe Leu Arg Leu Gln Glu Ser Leu	
	665	670 675
Ala Thr Thr Glu	Thr Phe Lys Gln Gln Lys Val Arg Met Ala Asn	
	680	685 690
Glu Gly Phe Asp	Pro Ser Thr Leu Ser Asp Pro Leu Tyr Val Leu	
	695	700 705
Asp Gln Ala Val	Gly Ala Tyr Leu Pro Leu Thr Thr Ala Arg Tyr	
	710	715 720
Ser Ala Leu Leu	Ala Gly Asn Leu Arg Ile	
	725	730

<210> 103

<211> 22

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 103

gagagccatg gggctccacc tg 22

<210> 104

<211> 18

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 104

ggagaatgtg gccacaac 18

<210> 105

<211> 26

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe



<400> 105  
 gccctggcac agtgactcca tagacg 26

<210> 106  
 <211> 18  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 106  
 atccacttca gcggacac 18

<210> 107  
 <211> 45  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 107  
 ccagtgccag gatacctctc ttccccccag agcataacag acacg 45

<210> 108  
 <211> 2579  
 <212> DNA  
 <213> Homo sapiens

<400> 108  
 cctgtgttaa gctgaggttt ccctagatc tcgtatatcc ccaacacata 50  
 cctccacgca cacacatccc caagaacctc gagctcacac caacagacac 100  
 acgcgcgcat acacactcgc tctcgcttgt ccatctccct cccgggggag 150  
 ccggcgcgcg ctcccacctt tgccgcacac tccggcgagc cgagcccgca 200  
 gcgctccagg attctgcggc tcggaactcg gattgcagct ctgaaccccc 250  
 atggtgggttt tttaaact tcttttcctt ctcttctcg ttttgattgc 300  
 accgtttcca tctgggggct agaggagcaa ggcagcagcc ttcccagcca 350  
 gcccttggtg gcttgccatc gtccatctgg cttataaaag tttgctgagc 400  
 gcagtccaga gggctgcgct gctcgtcccc tcggtctggca gaaggggggtg 450  
 acgctgggca gcggcgagga gcgcgccgct gcctctggcg ggctttcggc 500  
 ttgaggggca aggtgaagag cgcaccggcc gtgggggttta ccgagctgga 550  
 tttgtatgtt gcaccatgcc ttcttggatc ggggctgtga ttcttccct 600  
 cttggggctg ctgctctccc tccccgccgg ggcggatgtg aaggctcgga 650

gctgcggaga ggtccgccag gcgtacggtg ccaagggatt cagcctggcg 700  
gacatcccct accaggagat cgcaggggaa cacttaagaa tctgtcctca 750  
ggaatataca tgctgcacca cagaaatgga agacaagtta agccaacaaa 800  
gcaaactcga atttgaaaac cttgtggaag agacaagcca ttttgtgcgc 850  
accacttttg tgtccaggca taagaaatth gacgaattht tccgagagct 900  
cctggagaat gcagaaaagt cactaaatga tatgtttgta cggacctatg 950  
gcatgctgta catgcagaat tcagaagtct tccaggacct cttcacagag 1000  
ctgaaaaggt actacactgg gggtaatgtg aatctggagg aaatgctcaa 1050  
tgacttttgg gctcggctcc tggaaaggat gtttcagctg ataaaccctc 1100  
agtatcactt cagtgaagac tacctggaat gtgtgagcaa atacactgac 1150  
cagctcaagc catttgagga cgtgccccgg aaactgaaga ttcaggttac 1200  
ccgcgccttc attgctgccg ggacctttgt ccaggggctg actgtgggca 1250  
gagaagttgc aaaccgagtt tccaagggtca gcccacccc aggggtgtatc 1300  
cgtgccctca tgaagatgct gtactgccca tactgtcggg ggcttccac 1350  
tgtgaggccc tgcaacaact actgtctcaa cgtcatgaag ggctgcttgg 1400  
caaactcaggc tgacctcgac acagagtggg atctgtttat agatgcaatg 1450  
ctcttggtgg cagagcgact ggaggggcca ttcaacattg agtcgggtcat 1500  
ggacccgata gatgtcaaga tttctgaagc cattatgaac atgcaagaaa 1550  
acagcatgca ggtgtctgca aaggctcttc agggatgtgg tcagcccaaa 1600  
cctgctccag ccctcagatc tgcccgctca gctcctgaaa attttaatac 1650  
acgtttcagg ccctacaatc ctgaggaaag accaacaact gctgcaggca 1700  
caagcttggg ccggctgggtc acagacataa aagagaaatt gaagctctct 1750  
aaaaagggtc ggtcagcatt accctacact atctgcaagg acgagagcgt 1800  
gacagcgggc acgtccaacg aggaggaatg ctggaacggg cacagcaaag 1850  
ccagatactt gcctgagatc atgaatgatg ggctcaccaa ccagatcaac 1900  
aatcccgagg tggatgtgga catcactcgg cctgacactt tcatcagaca 1950  
gcagattatg gctctccgtg tgatgaccaa caaactaaaa aacgcctaca 2000  
atggcaatga tgtcaattht caggacacaa gtgatgaatc cagtgggtca 2050

gggagtggca gtgggtgcat ggatgacgtg tgtccacg agtttgagtt 2100  
 tgtcaccaca gaggcccccg cagtggatcc cgaccggaga gaggtggact 2150  
 cttctgcagc ccagcgtggc cactccctgc tctcctggtc tctcacctgc 2200  
 attgtcctgg cactgcagag actgtgcaga taatcttggg tttttggtca 2250  
 gatgaaactg catttttagct atctgaatgg ccaactcact tctttttctta 2300  
 cactcttggg caatggacca tgccacaaaa acttaccgtt ttctatgaga 2350  
 agagagcagt aatgcaatct gcctcccttt ttgttttccc aaagagtacc 2400  
 ggggtgccaga ctgaactgct tcctctttcc ttcagctatc tgtggggacc 2450  
 ttgtttattc tagagagaat tcttactcaa atttttcgta ccaggagatt 2500  
 ttcttacctt catttgcttt tatgctgcag aagtaaagga atctcacgtt 2550  
 gtgagggttt tttttttctc atttaaaat 2579

<210> 109

<211> 555

<212> PRT

<213> Homo sapiens

<400> 109

Met	Pro	Ser	Trp	Ile	Gly	Ala	Val	Ile	Leu	Pro	Leu	Leu	Gly	Leu	1	5	10	15
Leu	Leu	Ser	Leu	Pro	Ala	Gly	Ala	Asp	Val	Lys	Ala	Arg	Ser	Cys	20	25	30	
Gly	Glu	Val	Arg	Gln	Ala	Tyr	Gly	Ala	Lys	Gly	Phe	Ser	Leu	Ala	35	40	45	
Asp	Ile	Pro	Tyr	Gln	Glu	Ile	Ala	Gly	Glu	His	Leu	Arg	Ile	Cys	50	55	60	
Pro	Gln	Glu	Tyr	Thr	Cys	Cys	Thr	Thr	Glu	Met	Glu	Asp	Lys	Leu	65	70	75	
Ser	Gln	Gln	Ser	Lys	Leu	Glu	Phe	Glu	Asn	Leu	Val	Glu	Glu	Thr	80	85	90	
Ser	His	Phe	Val	Arg	Thr	Thr	Phe	Val	Ser	Arg	His	Lys	Lys	Phe	95	100	105	
Asp	Glu	Phe	Phe	Arg	Glu	Leu	Leu	Glu	Asn	Ala	Glu	Lys	Ser	Leu	110	115	120	
Asn	Asp	Met	Phe	Val	Arg	Thr	Tyr	Gly	Met	Leu	Tyr	Met	Gln	Asn	125	130	135	
Ser	Glu	Val	Phe	Gln	Asp	Leu	Phe	Thr	Glu	Leu	Lys	Arg	Tyr	Tyr	140	145	150	

Thr Gly Gly Asn Val Asn Leu Glu Glu Met Leu Asn Asp Phe Trp	155	160	165
Ala Arg Leu Leu Glu Arg Met Phe Gln Leu Ile Asn Pro Gln Tyr	170	175	180
His Phe Ser Glu Asp Tyr Leu Glu Cys Val Ser Lys Tyr Thr Asp	185	190	195
Gln Leu Lys Pro Phe Gly Asp Val Pro Arg Lys Leu Lys Ile Gln	200	205	210
Val Thr Arg Ala Phe Ile Ala Ala Arg Thr Phe Val Gln Gly Leu	215	220	225
Thr Val Gly Arg Glu Val Ala Asn Arg Val Ser Lys Val Ser Pro	230	235	240
Thr Pro Gly Cys Ile Arg Ala Leu Met Lys Met Leu Tyr Cys Pro	245	250	255
Tyr Cys Arg Gly Leu Pro Thr Val Arg Pro Cys Asn Asn Tyr Cys	260	265	270
Leu Asn Val Met Lys Gly Cys Leu Ala Asn Gln Ala Asp Leu Asp	275	280	285
Thr Glu Trp Asn Leu Phe Ile Asp Ala Met Leu Leu Val Ala Glu	290	295	300
Arg Leu Glu Gly Pro Phe Asn Ile Glu Ser Val Met Asp Pro Ile	305	310	315
Asp Val Lys Ile Ser Glu Ala Ile Met Asn Met Gln Glu Asn Ser	320	325	330
Met Gln Val Ser Ala Lys Val Phe Gln Gly Cys Gly Gln Pro Lys	335	340	345
Pro Ala Pro Ala Leu Arg Ser Ala Arg Ser Ala Pro Glu Asn Phe	350	355	360
Asn Thr Arg Phe Arg Pro Tyr Asn Pro Glu Glu Arg Pro Thr Thr	365	370	375
Ala Ala Gly Thr Ser Leu Asp Arg Leu Val Thr Asp Ile Lys Glu	380	385	390
Lys Leu Lys Leu Ser Lys Lys Val Trp Ser Ala Leu Pro Tyr Thr	395	400	405
Ile Cys Lys Asp Glu Ser Val Thr Ala Gly Thr Ser Asn Glu Glu	410	415	420
Glu Cys Trp Asn Gly His Ser Lys Ala Arg Tyr Leu Pro Glu Ile	425	430	435

Met	Asn	Asp	Gly	Leu	Thr	Asn	Gln	Ile	Asn	Asn	Pro	Glu	Val	Asp	440	445	450
Val	Asp	Ile	Thr	Arg	Pro	Asp	Thr	Phe	Ile	Arg	Gln	Gln	Ile	Met	455	460	465
Ala	Leu	Arg	Val	Met	Thr	Asn	Lys	Leu	Lys	Asn	Ala	Tyr	Asn	Gly	470	475	480
Asn	Asp	Val	Asn	Phe	Gln	Asp	Thr	Ser	Asp	Glu	Ser	Ser	Gly	Ser	485	490	495
Gly	Ser	Gly	Ser	Gly	Cys	Met	Asp	Asp	Val	Cys	Pro	Thr	Glu	Phe	500	505	510
Glu	Phe	Val	Thr	Thr	Glu	Ala	Pro	Ala	Val	Asp	Pro	Asp	Arg	Arg	515	520	525
Glu	Val	Asp	Ser	Ser	Ala	Ala	Gln	Arg	Gly	His	Ser	Leu	Leu	Ser	530	535	540
Trp	Ser	Leu	Thr	Cys	Ile	Val	Leu	Ala	Leu	Gln	Arg	Leu	Cys	Arg	545	550	555

<210> 110  
 <211> 21  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 110  
 aagcgtgaca gcgggcacgt c 21

<210> 111  
 <211> 24  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 111  
 tgcacagtct ctgcagtgcc cagg 24

<210> 112  
 <211> 40  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 112  
 gaatgctgga acgggcacag caaagccaga tacttgctg 40

<210> 113  
<211> 4649  
<212> DNA  
<213> Homo sapiens

<400> 113  
cgacgcgtg ggcggacgcg tgggcaaaag aactcggagt gccaaagcta 50  
aataagttag ctgagaaaac gcacgcagtt tgcagcgcct gcgccgggtg 100  
cgccaactac gcaaagacca agcgggctcc gcgcggaccg gccgcggggc 150  
tagggaccgc gctttggcct tcaggctccc tagcagcggg gaaaaggaat 200  
tgctgcccgc agtttctgcg gaggtggagg gagatcagga aacggcttct 250  
tcctcacttc gccgcctggt gagtgtcggg gagattggca aacgcctagg 300  
aaaggactgg ggaaaatagc cctgggaaag tggagaaggat gatcaggagg 350  
ccgtccact acggcagttt atctgtctga tcagagccag acgcgacgcg 400  
tccacttcgc agttctttcc aggtgtgggg accgcaggac agacggccga 450  
tcccgccgcc ctccgtacca gcactcccag gagagtcagc ctgctcccc 500  
aacgtcgagg gcgctctggc cacgaaaagt tcctgtccac tgtgattctc 550  
aattccttgc ttggtttttt tctccagaga acttttgggt ggagatatta 600  
acttttttct tttttttttt ccttggtgga agctgctcta gggagggggg 650  
aggaggagga gaaagtgaat tgtgctggag aagagcgagc cctccttgtt 700  
cttcggaggt cccatccatt aagccatcac ttctggaaga ttaaagttgt 750  
cggacatggt gacagctgag aggagaggag gatttcttgc caggtggaga 800  
gtcttcaccg tctgttgggt gcatgtgtgc gccgcagcg gcgcggggcg 850  
cgtggttctc cgcgtggagt ctacactggg acctgagtga atggctcca 900  
ggggctgtgc ggggcatccg cctccgcctt ctccacaggc ctgtgtctgt 950  
cctggaaaga tgctagcaat gggggcgctg gcaggattct ggatcctctg 1000  
cctcctcact tatggttacc tgtcctgggg ccaggcctta gaagaggagg 1050  
aagaaggggc cttactagct caagctggag agaaactaga gccagcaca 1100  
acttccacct ccagcccca tctcattttc atcctagcgg atgatcaggg 1150  
atthagagat gtgggttacc acggatctga gattaaaaca cctactcttg 1200  
acaagctcgc tgccgaagga gttaaactgg agaactacta tgtccagcct 1250

atttgacac catccaggag tcagtttatt actggaaagt atcagataca 1300  
caccggactt caacattcta tcataagacc tacccaaccc aactgtttac 1350  
ctctggacaa tgccacccta cctcagaaac tgaaggaggt tggatattca 1400  
acgcatatgg tcggaaaatg gcacttgggt tttaacagaa aagaatgcat 1450  
gccaccaga agaggatttg ataccttttt tggttccctt ttgggaagtg 1500  
gggattacta tacacactac aaatgtgaca gtctgggat gtgtggctat 1550  
gacttgatg aaaacgacaa tgctgcctgg gactatgaca atggcatata 1600  
ctccacacag atgtacactc agagagtaca gcaaacttta gcttccata 1650  
acccacaaa gcctatattt ttatatactg cctatcaagc tggtcattca 1700  
ccactgcaag ctctggcag gtatttcgaa cactaccgat ccattatcaa 1750  
cataaacagg agaagatatg ctgccatgct ttcttgctta gatgaagcaa 1800  
tcaacaacgt gacattggct ctaaagactt atggtttcta taacaacagc 1850  
attatcattt actcttcaga taatggtggc cagcctacgg caggaggag 1900  
taactggcct ctacagagga gcaaaggaac atattgggaa ggagggatcc 1950  
gggctgtagg ctttgtgcat agcccacttc tgaaaaacaa gggaacagtg 2000  
tgtaaggaac ttgtgcacat cactgactgg taccctactc tcatttcaact 2050  
ggctgaagga cagattgatg aggacattca actagatggc tatgatattc 2100  
gggagaccat aagtgaggggt cttcgctcac cccgagtaga tattttgcat 2150  
aacattgacc cctatacacc aaggcaaaaa atggctcctg ggcagcaggc 2200  
tatgggatct ggaacactgc aatccagtca gccatcagag tgcagcactg 2250  
gaaattgctt acaggaaatc ctggctacag cgactgggtc cccctcagt 2300  
ctttcagcaa cctgggaccg aaccggtggc acaatgaacg gatcaccttg 2350  
tcaactggca aaagtgtatg gcttttcaac atcacagccg acccatatga 2400  
gagggtggac ctatctaaca ggtatccagg aatcgtgaag aagctcctac 2450  
ggaggctctc acagttcaac aaaactgcag tgccggtcag gtatcccccc 2500  
aaagacccca gaagtaaccc taggctcaat ggaggggtct ggggaccatg 2550  
gtataaagag gaaaccaaga aaaagaagcc aagcaaaaat caggctgaga 2600  
aaaagcaaaa gaaaagcaaa aaaaagaaga agaaacagca gaaagcagtc 2650  
tcaggtaaac cagcaaattt ggctcgataa tatcgctggc ctaagcgtca 2700

ggcttgtttt catgctgtgc cactccagag acttctgcc cctggccgcc 2750  
acactgaaaa ctgtcctgct cagtgccaa gtgctactct tgcaagccac 2800  
acttagagag agtggagatg tttattttctc tcgctccttt agaaaacgtg 2850  
gtgagtcctg agttccactg ctgtgcttca gtcaactgac caaacactgc 2900  
tttgaattat aggaggagaa caataaccta ccatccgcaa gcatgctaata 2950  
ttgatggaag ttacagggtta gcatgattaa aactaccttt gataaattac 3000  
agtcaaagat tgtgtcacct caaaggcctt gaagaatata ttttcttggt 3050  
gaatttttgt atgtctgtca tatgacactt gggtttttta attaatctta 3100  
ttttatatat ataaatatat gtttcttttc ctgtgaaaag ctgtttttct 3150  
cacatgtgaa cagcttgcac ctcatcttac catgcgtgag ggaatggcaa 3200  
ataagaatgt ttgagcacac tgcccacaat gaatgtaact attttctaaa 3250  
cactttacta gaagaacatt tcagtataaa aaacctaat tatttttaca 3300  
gaaaaatatt ttgttgtttt tataaaaagt tatgcaaag acttttattt 3350  
ttatttcctg cataccatta gaagaatttt atttcatttc ttcaaattat 3400  
caagcactgt aatactataa attaatgtaa tactgtgtga attcagacta 3450  
taaaaaacat cattcagaaa actttataat cgtcattggt caatcaagat 3500  
tttgaatgta ataagatgaa tatattcctt acaaattact tggaaattca 3550  
atgtttgtgc agagttgaga caactttatt gtttctatca taaactattt 3600  
atgtatctta attattaaaa tgatttactt tatggcacta gaaaatttac 3650  
tgtggctttt ctgatctaac ttctagctaa aattgtatca ttggtcctaa 3700  
aaaataaaaa tctttactaa taggcaattg aaggaaatgg ttgctaaca 3750  
ccacagtaat ataatatgat ttacagata gatgcttccc cttggctatg 3800  
acatggagaa agattttccc ataataataa ctaatattta tattaggttg 3850  
gtgcaaaaact agttgcgggt tttccatta aaagtaataa cttactctt 3900  
atacaaagtg gacactgtgg ggagatacag agaaatggaa gatacggatc 3950  
ctgcctggag taggtaacct tgcttggaac ccccatgc aaacgtcatg 4000  
aggagaatta aaggagtatt atcagtaatg aagtttatca tgggtcatca 4050  
atgagcatag attggtgtgg atcctgtaga cctggtgtt ttctttgaag 4100



tgccctctcc taatgcagag gccttgaagc ttacagtata cacttgaaaa 4150  
 gtcacagata gctagaatta tgatctttga agttataact gtgatctgaa 4200  
 aatgtgtgtg gtggtatgac agcataccat taaatacatt tacatcacag 4250  
 ctcaaaggac tgtgatataa tccattttata tcacaactca aaggactgtg 4300  
 atataatcca tttatatcac agctcacagt ttctgaaaat gtataaaaaga 4350  
 atctataatc tagtactgaa attactaaat tgggtaagat gattttaaag 4400  
 attttaattt taacatttta tttctagaat atatggctcc attttatttt 4450  
 atagtgtaaa gttgtatttc ctaaagtttg tgttttgtcg acagtatctt 4500  
 ttaaatgagt cttaaaaata aaggcatatt gttcatgttt aaaaaaaaaa 4550  
 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 4600  
 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 4649

<210> 114

<211> 515

<212> PRT

<213> Homo sapiens

<400> 114 \*

Met	Ala	Pro	Arg	Gly	Cys	Ala	Gly	His	Pro	Pro	Pro	Pro	Ser	Pro	1	5	10	15
Gln	Ala	Cys	Val	Cys	Pro	Gly	Lys	Met	Leu	Ala	Met	Gly	Ala	Leu	20	25	30	
Ala	Gly	Phe	Trp	Ile	Leu	Cys	Leu	Leu	Thr	Tyr	Gly	Tyr	Leu	Ser	35	40	45	
Trp	Gly	Gln	Ala	Leu	Glu	Glu	Glu	Glu	Glu	Gly	Ala	Leu	Leu	Ala	50	55	60	
Gln	Ala	Gly	Glu	Lys	Leu	Glu	Pro	Ser	Thr	Thr	Ser	Thr	Ser	Gln	65	70	75	
Pro	His	Leu	Ile	Phe	Ile	Leu	Ala	Asp	Asp	Gln	Gly	Phe	Arg	Asp	80	85	90	
Val	Gly	Tyr	His	Gly	Ser	Glu	Ile	Lys	Thr	Pro	Thr	Leu	Asp	Lys	95	100	105	
Leu	Ala	Ala	Glu	Gly	Val	Lys	Leu	Glu	Asn	Tyr	Tyr	Val	Gln	Pro	110	115	120	
Ile	Cys	Thr	Pro	Ser	Arg	Ser	Gln	Phe	Ile	Thr	Gly	Lys	Tyr	Gln	125	130	135	
Ile	His	Thr	Gly	Leu	Gln	His	Ser	Ile	Ile	Arg	Pro	Thr	Gln	Pro	140	145	150	

Asn Cys Leu Pro Leu Asp Asn Ala Thr Leu Pro Gln Lys Leu Lys	155	160	165
Glu Val Gly Tyr Ser Thr His Met Val Gly Lys Trp His Leu Gly	170	175	180
Phe Asn Arg Lys Glu Cys Met Pro Thr Arg Arg Gly Phe Asp Thr	185	190	195
Phe Phe Gly Ser Leu Leu Gly Ser Gly Asp Tyr Tyr Thr His Tyr	200	205	210
Lys Cys Asp Ser Pro Gly Met Cys Gly Tyr Asp Leu Tyr Glu Asn	215	220	225
Asp Asn Ala Ala Trp Asp Tyr Asp Asn Gly Ile Tyr Ser Thr Gln	230	235	240
Met Tyr Thr Gln Arg Val Gln Gln Ile Leu Ala Ser His Asn Pro	245	250	255
Thr Lys Pro Ile Phe Leu Tyr Thr Ala Tyr Gln Ala Val His Ser	260	265	270
Pro Leu Gln Ala Pro Gly Arg Tyr Phe Glu His Tyr Arg Ser Ile	275	280	285
Ile Asn Ile Asn Arg Arg Arg Tyr Ala Ala Met Leu Ser Cys Leu	290	295	300
Asp Glu Ala Ile Asn Asn Val Thr Leu Ala Leu Lys Thr Tyr Gly	305	310	315
Phe Tyr Asn Asn Ser Ile Ile Ile Tyr Ser Ser Asp Asn Gly Gly	320	325	330
Gln Pro Thr Ala Gly Gly Ser Asn Trp Pro Leu Arg Gly Ser Lys	335	340	345
Gly Thr Tyr Trp Glu Gly Gly Ile Arg Ala Val Gly Phe Val His	350	355	360
Ser Pro Leu Leu Lys Asn Lys Gly Thr Val Cys Lys Glu Leu Val	365	370	375
His Ile Thr Asp Trp Tyr Pro Thr Leu Ile Ser Leu Ala Glu Gly	380	385	390
Gln Ile Asp Glu Asp Ile Gln Leu Asp Gly Tyr Asp Ile Trp Glu	395	400	405
Thr Ile Ser Glu Gly Leu Arg Ser Pro Arg Val Asp Ile Leu His	410	415	420
Asn Ile Asp Pro Tyr Thr Pro Arg Gln Lys Met Ala Pro Gly Gln	425	430	435

Gln	Ala	Met	Gly	Ser	Gly	Thr	Leu	Gln	Ser	Ser	Gln	Pro	Ser	Glu
			440						445					450
Cys	Ser	Thr	Gly	Asn	Cys	Leu	Gln	Glu	Ile	Leu	Ala	Thr	Ala	Thr
			455						460					465
Gly	Ser	Pro	Leu	Ser	Leu	Ser	Ala	Thr	Trp	Asp	Arg	Thr	Gly	Gly
			470						475					480
Thr	Met	Asn	Gly	Ser	Pro	Cys	Gln	Leu	Ala	Lys	Val	Tyr	Gly	Phe
			485						490					495
Ser	Thr	Ser	Gln	Pro	Thr	His	Met	Arg	Gly	Trp	Thr	Tyr	Leu	Thr
			500						505					510
Gly	Ile	Gln	Glu	Ser										
			515											

<210> 115  
 <211> 24  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 115  
 cccaacccaa ctgtttacct ctgg 24

<210> 116  
 <211> 24  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 116  
 ctctctgagt gtacatctgt gtgg 24

<210> 117  
 <211> 53  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<220>  
 <221> unsure  
 <222> 33  
 <223> unknown base

<400> 117  
 gccaccctac ctcagaaact gaaggagggtt ggntattcaa cgcatatggt 50

cgg 53

<210> 118

<211> 2260

<212> DNA

<213> Homo sapiens

<220>

<221> unsure

<222> 2009, 2026, 2033, 2055, 2074, 2078, 2086

<223> unknown base

<400> 118

cggacgcgtg ggtgcgagtg gagcggagga cccgagcggc tgaggagaga 50  
ggaggcggcg gcttagctgc tacgggggtcc ggccggcgcc ctcccgaggg 100  
gggctcagga ggaggaagga ggaccctgctc gagaatgcct ctgccctgga 150  
gccttgcgct cccgctgctg ctctcctggg tggcaggtgg ttccgggaac 200  
gcggccagtg caaggcatca cgggttggtta gcatcggcac gtcagcctgg 250  
ggtctgtcac tatggaacta aactggcctg ctgctacggc tggagaagaa 300  
acagcaaggg agtctgtgaa gctacatgcg aacctggatg taagtttggg 350  
gagtgcgtgg gaccaaaca atgcagatgc ttccaggat acaccgggaa 400  
aacctgcagt caagatgtga atgagtgtgg aatgaaacc cggccatgcc 450  
aacacagatg tgtgaataca cacggaagct acaagtgctt ttgcctcagt 500  
ggccacatgc tcatgccaga tgctacgtgt gtgaactcta ggacatgtgc 550  
catgataaac tgtcagtaca gctgtgaaga cacagaagaa gggccacagt 600  
gcctgtgtcc atcctcagga ctccgcctgg ccccaaattg aagagactgt 650  
ctagatattg atgaatgtgc ctctggtaaa gtcactctgc cctacaatcg 700  
aagatgtgtg aacacatttg gaagctacta ctgcaaattg cacattgggt 750  
tcgaactgca atatatcagt ggacgatatg actgtataga tataaatgaa 800  
tgtactatgg atagccatac gtgcagccac catgccaatt gcttcaatac 850  
ccaagggtcc ttcaagtgtg aatgcaagca gggatataaa ggcaatggac 900  
ttcgggtgtc tgctatccct gaaaattctg tgaaggaagt cctcagagca 950  
cctggtacca tcaaagacag aatcaagaag ttgcttgctc acaaaaacag 1000  
catgaaaaag aaggcaaaaa ttaaaaatgt taccacagaa cccaccagga 1050  
ctcctacccc taaggtgaac ttgcagccct tcaactatga agagatagtt 1100

tccagaggcg ggaactctca tggaggtaaa aaagggaatg aagagaaatg 1150  
 aaagaggggc ttgaggatga gaaaagagaa gagaaagccc tgaagaatga 1200  
 catagaggag cgaagcctgc gaggagatgt gtttttcctt aaggtgaatg 1250  
 aagcaggtga attcggcctg attctggtcc aaaggaaagc gctaacttcc 1300  
 aaactggaac ataaagattt aaatatctcg gttgactgca gcttcaatca 1350  
 tgggatctgt gactggaaac aggatagaga agatgatttt gactggaatc 1400  
 ctgctgatcg agataatgct attggcttct atatggcagt tccggccttg 1450  
 gcaggtcaca agaaagacat tggccgattg aaacttctcc tacctgacct 1500  
 gcaaccccaa agcaacttct gtttgctctt tgattaccgg ctggccggag 1550  
 acaaagtcgg gaaacttcga gtgtttgtga aaaacagtaa caatgccctg 1600  
 gcatgggaga agaccacgag tgaggatgaa aagtggaaga cagggaaaat 1650  
 tcagttgtat caaggaactg atgctaccaa aagcatcatt tttgaagcag 1700  
 aacgtggcaa gggcaaaacc ggcgaaatcg cagtggatgg cgtcttgctt 1750  
 gtttcaggct tatgtccaga tagcctttta tctgtggatg actgaatgtt 1800  
 actatcttta tatttgactt tgtatgtcag ttccctgggt tttttgatat 1850  
 tgcatcatag gacctctggc attttagaat tactagctga aaaattgtaa 1900  
 tgtaccaaca gaaatattat tgtaagatgc ctttcttgta taagatatgc 1950  
 caatatttgc tttaaataatc atatcactgt atcttctcag tcatttctga 2000  
 atctttccnc attatattat aaaatntgga aangtcagtt tatctcccct 2050  
 cctcngtata tctgatttgt atangtangt tgatgngctt ctctctacaa 2100  
 catttctaga aaatagaaaa aaaagcacag agaaatgttt aactgtttga 2150  
 ctcttatgat acttcttgga aactatgaca tcaaagatag acttttgcct 2200  
 aagtggctta gctgggtctt tcatagccaa acttgtatat ttaattcttt 2250  
 gtaataataa 2260

<210> 119

<211> 338

<212> PRT

<213> Homo sapiens

<400> 119

Met Pro Leu Pro Trp Ser Leu Ala Leu Pro Leu Leu Leu Ser Trp

1

5

10

15

Val	Ala	Gly	Gly	Phe	Gly	Asn	Ala	Ala	Ser	Ala	Arg	His	His	Gly		20	25	30
Leu	Leu	Ala	Ser	Ala	Arg	Gln	Pro	Gly	Val	Cys	His	Tyr	Gly	Thr		35	40	45
Lys	Leu	Ala	Cys	Cys	Tyr	Gly	Trp	Arg	Arg	Asn	Ser	Lys	Gly	Val		50	55	60
Cys	Glu	Ala	Thr	Cys	Glu	Pro	Gly	Cys	Lys	Phe	Gly	Glu	Cys	Val		65	70	75
Gly	Pro	Asn	Lys	Cys	Arg	Cys	Phe	Pro	Gly	Tyr	Thr	Gly	Lys	Thr		80	85	90
Cys	Ser	Gln	Asp	Val	Asn	Glu	Cys	Gly	Met	Lys	Pro	Arg	Pro	Cys		95	100	105
Gln	His	Arg	Cys	Val	Asn	Thr	His	Gly	Ser	Tyr	Lys	Cys	Phe	Cys		110	115	120
Leu	Ser	Gly	His	Met	Leu	Met	Pro	Asp	Ala	Thr	Cys	Val	Asn	Ser		125	130	135
Arg	Thr	Cys	Ala	Met	Ile	Asn	Cys	Gln	Tyr	Ser	Cys	Glu	Asp	Thr		140	145	150
Glu	Glu	Gly	Pro	Gln	Cys	Leu	Cys	Pro	Ser	Ser	Gly	Leu	Arg	Leu		155	160	165
Ala	Pro	Asn	Gly	Arg	Asp	Cys	Leu	Asp	Ile	Asp	Glu	Cys	Ala	Ser		170	175	180
Gly	Lys	Val	Ile	Cys	Pro	Tyr	Asn	Arg	Arg	Cys	Val	Asn	Thr	Phe		185	190	195
Gly	Ser	Tyr	Tyr	Cys	Lys	Cys	His	Ile	Gly	Phe	Glu	Leu	Gln	Tyr		200	205	210
Ile	Ser	Gly	Arg	Tyr	Asp	Cys	Ile	Asp	Ile	Asn	Glu	Cys	Thr	Met		215	220	225
Asp	Ser	His	Thr	Cys	Ser	His	His	Ala	Asn	Cys	Phe	Asn	Thr	Gln		230	235	240
Gly	Ser	Phe	Lys	Cys	Lys	Cys	Lys	Gln	Gly	Tyr	Lys	Gly	Asn	Gly		245	250	255
Leu	Arg	Cys	Ser	Ala	Ile	Pro	Glu	Asn	Ser	Val	Lys	Glu	Val	Leu		260	265	270
Arg	Ala	Pro	Gly	Thr	Ile	Lys	Asp	Arg	Ile	Lys	Lys	Leu	Leu	Ala		275	280	285
His	Lys	Asn	Ser	Met	Lys	Lys	Lys	Ala	Lys	Ile	Lys	Asn	Val	Thr		290	295	300

Pro Glu Pro Thr Arg Thr Pro Thr Pro Lys Val Asn Leu Gln Pro  
305 310 315

Phe Asn Tyr Glu Glu Ile Val Ser Arg Gly Gly Asn Ser His Gly  
320 325 330

Gly Lys Lys Gly Asn Glu Glu Lys  
335

<210> 120

<211> 22

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 120

cctcagtggc cacatgctca tg 22

<210> 121

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 121

ggctgcacgt atggctatcc atag 24

<210> 122

<211> 50

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 122

gataaactgt cagtacagct gtgaagacac agaagaagg ccacagtgcc 50

<210> 123

<211> 1199

<212> DNA

<213> Homo sapiens

<400> 123

gggagctgct gctgtggctg ctggtgctgt gcgcgctgct cctgctcttg 50

gtgcagctgc tgcgcttctt gagggctgac ggcgacctga cgctactatg 100

ggccgagtgg cagggacgac gcccagaatg ggagctgact gatatggttg 150

tgtgggtgac tggagcctcg agtgggaattg gtgaggagct ggcttaccag 200

ttgtctaaac taggagtttc tcttgctgctg tcagccagaa gagtgcattga 250

gctggaaagg gtgaaaagaa gatgcctaga gaatggcaat ttaaaagaaa 300  
aagatatact tgttttgccc cttgacctga ccgacactgg ttcccatgaa 350  
gcggtaccac aagctgttct ccaggagttt ggtagaatcg acattctggt 400  
caacaatggt ggaatgtccc agcgttctct gtgcatggat accagcttgg 450  
atgtctacag aaagctaata gagcttaact acttagggac ggtgtccttg 500  
acaaaatgtg ttctgcctca catgatcgag aggaagcaag gaaagattgt 550  
tactgtgaat agcatcctgg gtatcatatc tgtacctctt tccattggat 600  
actgtgctag caagcatgct ctccgggggt tttttaatgg ccttcgaaca 650  
gaacttgcca catacccagg tataatagtt tctaacattt gcccaggacc 700  
tgtgcaatca aatattgtgg agaattccct agctggagaa gtcacaaaaga 750  
ctataggcaa taatggagac cagtcccaca agatgacaac cagtcgttgt 800  
gtgcggctga tgtaatcag catggccaat gatttgaaag aagtttggt 850  
ctcagaacaa cctttcttgt tagtaacata tttgtggcaa tacatgcaa 900  
cctgggcctg gtggataacc aacaagatgg ggaagaaaag gattgagaac 950  
tttaagagtg gtgtggatgc agactcttct tattttaaaa tctttaagac 1000  
aaaacatgac tgaaaagagc acctgtactt ttcaagccac tggagggaga 1050  
aatgaaaaac atgaaaacag caatcttctt atgcttctga ataatcaaag 1100  
actaatttgt gattttactt tttaatagat atgactttgc ttccaacatg 1150  
gaatgaaata aaaaataaat aataaaagat tgccatgaat cttgcaaaa 1199

<210> 124

<211> 289

<212> PRT

<213> Homo sapiens

<400> 124

Met	Val	Val	Trp	Val	Thr	Gly	Ala	Ser	Ser	Gly	Ile	Gly	Glu	Glu
1				5					10				15	

Leu	Ala	Tyr	Gln	Leu	Ser	Lys	Leu	Gly	Val	Ser	Leu	Val	Leu	Ser
				20					25				30	

Ala	Arg	Arg	Val	His	Glu	Leu	Glu	Arg	Val	Lys	Arg	Arg	Cys	Leu
				35					40				45	

Glu	Asn	Gly	Asn	Leu	Lys	Glu	Lys	Asp	Ile	Leu	Val	Leu	Pro	Leu
				50					55				60	



Asp	Leu	Thr	Asp	Thr	Gly	Ser	His	Glu	Ala	Ala	Thr	Lys	Ala	Val	65	70	75
Leu	Gln	Glu	Phe	Gly	Arg	Ile	Asp	Ile	Leu	Val	Asn	Asn	Gly	Gly	80	85	90
Met	Ser	Gln	Arg	Ser	Leu	Cys	Met	Asp	Thr	Ser	Leu	Asp	Val	Tyr	95	100	105
Arg	Lys	Leu	Ile	Glu	Leu	Asn	Tyr	Leu	Gly	Thr	Val	Ser	Leu	Thr	110	115	120
Lys	Cys	Val	Leu	Pro	His	Met	Ile	Glu	Arg	Lys	Gln	Gly	Lys	Ile	125	130	135
Val	Thr	Val	Asn	Ser	Ile	Leu	Gly	Ile	Ile	Ser	Val	Pro	Leu	Ser	140	145	150
Ile	Gly	Tyr	Cys	Ala	Ser	Lys	His	Ala	Leu	Arg	Gly	Phe	Phe	Asn	155	160	165
Gly	Leu	Arg	Thr	Glu	Leu	Ala	Thr	Tyr	Pro	Gly	Ile	Ile	Val	Ser	170	175	180
Asn	Ile	Cys	Pro	Gly	Pro	Val	Gln	Ser	Asn	Ile	Val	Glu	Asn	Ser	185	190	195
Leu	Ala	Gly	Glu	Val	Thr	Lys	Thr	Ile	Gly	Asn	Asn	Gly	Asp	Gln	200	205	210
Ser	His	Lys	Met	Thr	Thr	Ser	Arg	Cys	Val	Arg	Leu	Met	Leu	Ile	215	220	225
Ser	Met	Ala	Asn	Asp	Leu	Lys	Glu	Val	Trp	Ile	Ser	Glu	Gln	Pro	230	235	240
Phe	Leu	Leu	Val	Thr	Tyr	Leu	Trp	Gln	Tyr	Met	Pro	Thr	Trp	Ala	245	250	255
Trp	Trp	Ile	Thr	Asn	Lys	Met	Gly	Lys	Lys	Arg	Ile	Glu	Asn	Phe	260	265	270
Lys	Ser	Gly	Val	Asp	Ala	Asp	Ser	Ser	Tyr	Phe	Lys	Ile	Phe	Lys	275	280	285
Thr Lys His Asp																	

<210> 125

<211> 19

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 125

gcaatgaact gggagctgc 19

<210> 126

<211> 19

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 126

ctgtgaatag catcctggg 19

<210> 127

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 127

cttttcaagc cactggaggg 20

<210> 128

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 128

ctgtagacat ccaagctggt atcc 24

<210> 129

<211> 23

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 129

aagagtctgc atccacacca ctc 23

<210> 130

<211> 46

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 130

acctgacgct actatgggcc gagtggcagg gacgacgccc agaattg 46

<210> 131  
<211> 2365  
<212> DNA  
<213> Homo sapiens

<400> 131  
gcgacgtggg caccgccatc agctgttcgc gcgtcttctc ctccaggtgg 50  
ggcaggggtt tcgggctggg ggagcatgtg ctgggacagg acagcatcct 100  
caatcaatcc aacagcatat tcggttgcac cttctacaca ctacagctat 150  
tgttaggttg cctgoggaca cgctgggcct ctgtcctgat gctgctgagc 200  
tcctgtgtgt ctctcgtcgg ttctgtctac ctggcctgga tcctgttctt 250  
cgtgctctat gatttctgca ttgtttgtat caccacctat gctatcaacg 300  
tgagcctgat gtggctcagt ttccggaagg tccaagaacc ccagggaag 350  
gctaagaggc actgagccct caaccaagc caggctgacc tcattctgctt 400  
tgctttggtc ttcaagccgc tcagcgtgcc tgtggacagc gtggccccgg 450  
ccccccaag cctcaggagg gcaacacagt ccctggcgag tggccctggc 500  
aggccagtgt gaggaggcaa ggagcccaca tctgcagcgg ctccctggtg 550  
gcagacacct gggtcctcac tgetgcccac tgctttgaaa aggagcagc 600  
aacagaactg aattcctggt cagtggctcct gggttctctg cagcgtgagg 650  
gactcagccc tggggccgaa gaggtggggg tggctgccct gcagttgcc 700  
agggcctata accactacag ccagggtca gacctggccc tgctgcagct 750  
cgcccccccc acgaccacaca caccctctg cctgccccag ccgcccac 800  
gcttccccctt tggagcctcc tgetgggcca ctggctggga tcaggacacc 850  
agtgatgctc ctgggacctc acgcaatctg cgctgcgtc tcattcagtcg 900  
ccccacatgt aactgtatct acaaccagct gcaccagcga cacctgtcca 950  
accggccccg gcctgggatg ctatgtgggg gccccagcc tggggtgcag 1000  
ggcccctgtc agggagattc cgggggccct gtgctgtgcc tcgagcctga 1050  
cggacactgg gttcaggctg gcatcatcag ctttgcacatc agctgtgccc 1100  
aggaggacgc tcctgtgctg ctgaccaaca cagctgctca cagttcctgg 1150  
ctgcaggctc gagttcaggg ggcagctttc ctggcccaga gccagagac 1200  
ccggagatg agtgatgagg acagctgtgt agcctgtgga tccttgagga 1250  
cagcaggtcc ccaggcagga gcaccctccc catggccctg ggaggccagg 1300

ctgatgcacc agggacagct ggctgtggc ggagccctgg tgtcagagga 1350  
 ggcggtgcta actgctgcc actgcttcat tgggcgccag gcccagagg 1400  
 aatggagcgt agggctgggg accagaccgg aggagtgggg cctgaagcag 1450  
 ctcatcctgc atggagccta caccaccct gaggggggct acgacatggc 1500  
 cctoctgctg ctggcccagc ctgtgacact gggagccagc ctgcgggccc 1550  
 tctgctgcc ctatcctgac caccacctgc ctgatgggga gcgtggctgg 1600  
 gttctgggac gggcccgccc aggagcaggc atcagctccc tccagacagt 1650  
 gcccgtgacc ctctggggc ctagggcctg cagccggctg catgcagctc 1700  
 ctgggggtga tggcagccct attctgccgg ggatggtgtg taccagtgt 1750  
 gtgggtgagc tgcccagctg tgagggcctg tctggggcac cactggtgca 1800  
 tgaggtgagg ggcacatggt tcctggccgg gctgcacagc ttcggagatg 1850  
 cttgccaagg ccccgccagg ccggcggctc tcaccgcgct cctgcctat 1900  
 gaggactggg tcagcagttt ggactggcag gtctacttcg ccgaggaacc 1950  
 agagcccag gctgagcctg gaagctgcct ggccaacata agccaacca 2000  
 ccagctgctg acaggggacc tggccattct caggacaaga gaatgcaggc 2050  
 aggcaaattg cattactgcc cctgtcctcc ccaccctgtc atgtgtgatt 2100  
 ccaggcacca gggcaggccc agaagcccag cagctgtggg aaggaacctg 2150  
 cctggggcca caggtgccc ctccccacc tgcaggacag ggggtgtctgt 2200  
 ggacactccc acacccaact ctgctaccaa gcaggcgtct cagctttcct 2250  
 cctcctttac tctttcagat acaatcacgc cagccacgtt gttttgaaaa 2300  
 tttctttttt tggggggcag cagttttcct ttttttaaac ttaaataaat 2350  
 tgttacaaaa taaaa 2365

<210> 132

<211> 571

<212> PRT

<213> Homo sapiens

<400> 132

Met	Leu	Leu	Ser	Ser	Leu	Val	Ser	Leu	Ala	Gly	Ser	Val	Tyr	Leu
1				5					10					15

Ala	Trp	Ile	Leu	Phe	Phe	Val	Leu	Tyr	Asp	Phe	Cys	Ile	Val	Cys
				20					25					30

Ile Thr Thr Tyr	Ala	Ile Asn Val Ser	Leu Met Trp	Leu Ser Phe	
	35		40		45
Arg Lys Val Gln	Glu Pro Gln Gly Lys	Ala Lys Arg His Gly	Asn		
	50		55		60
Thr Val Pro Gly	Glu Trp Pro Trp Gln	Ala Ser Val Arg Arg	Gln		
	65		70		75
Gly Ala His Ile	Cys Ser Gly Ser Leu	Val Ala Asp Thr Trp	Val		
	80		85		90
Leu Thr Ala Ala	His Cys Phe Glu Lys	Ala Ala Ala Thr Glu	Leu		
	95		100		105
Asn Ser Trp Ser	Val Val Leu Gly Ser	Leu Gln Arg Glu Gly	Leu		
	110		115		120
Ser Pro Gly Ala	Glu Glu Val Gly Val	Ala Ala Leu Gln Leu	Pro		
	125		130		135
Arg Ala Tyr Asn	His Tyr Ser Gln Gly	Ser Asp Leu Ala Leu	Leu		
	140		145		150
Gln Leu Ala His	Pro Thr Thr His Thr	Pro Leu Cys Leu Pro	Gln		
	155		160		165
Pro Ala His Arg	Phe Pro Phe Gly Ala	Ser Cys Trp Ala Thr	Gly		
	170		175		180
Trp Asp Gln Asp	Thr Ser Asp Ala Pro	Gly Thr Leu Arg Asn	Leu		
	185		190		195
Arg Leu Arg Leu	Ile Ser Arg Pro Thr	Cys Asn Cys Ile Tyr	Asn		
	200		205		210
Gln Leu His Gln	Arg His Leu Ser Asn	Pro Ala Arg Pro Gly	Met		
	215		220		225
Leu Cys Gly Gly	Pro Gln Pro Gly Val	Gln Gly Pro Cys Gln	Gly		
	230		235		240
Asp Ser Gly Gly	Pro Val Leu Cys Leu	Glu Pro Asp Gly His	Trp		
	245		250		255
Val Gln Ala Gly	Ile Ile Ser Phe Ala	Ser Ser Cys Ala Gln	Glu		
	260		265		270
Asp Ala Pro Val	Leu Leu Thr Asn Thr	Ala Ala His Ser Ser	Trp		
	275		280		285
Leu Gln Ala Arg	Val Gln Gly Ala Ala	Phe Leu Ala Gln Ser	Pro		
	290		295		300
Glu Thr Pro Glu	Met Ser Asp Glu Asp	Ser Cys Val Ala Cys	Gly		
	305		310		315

Ser	Leu	Arg	Thr	Ala	Gly	Pro	Gln	Ala	Gly	Ala	Pro	Ser	Pro	Trp	320	325	330
Pro	Trp	Glu	Ala	Arg	Leu	Met	His	Gln	Gly	Gln	Leu	Ala	Cys	Gly	335	340	345
Gly	Ala	Leu	Val	Ser	Glu	Glu	Ala	Val	Leu	Thr	Ala	Ala	His	Cys	350	355	360
Phe	Ile	Gly	Arg	Gln	Ala	Pro	Glu	Glu	Trp	Ser	Val	Gly	Leu	Gly	365	370	375
Thr	Arg	Pro	Glu	Glu	Trp	Gly	Leu	Lys	Gln	Leu	Ile	Leu	His	Gly	380	385	390
Ala	Tyr	Thr	His	Pro	Glu	Gly	Gly	Tyr	Asp	Met	Ala	Leu	Leu	Leu	395	400	405
Leu	Ala	Gln	Pro	Val	Thr	Leu	Gly	Ala	Ser	Leu	Arg	Pro	Leu	Cys	410	415	420
Leu	Pro	Tyr	Pro	Asp	His	His	Leu	Pro	Asp	Gly	Glu	Arg	Gly	Trp	425	430	435
Val	Leu	Gly	Arg	Ala	Arg	Pro	Gly	Ala	Gly	Ile	Ser	Ser	Leu	Gln	440	445	450
Thr	Val	Pro	Val	Thr	Leu	Leu	Gly	Pro	Arg	Ala	Cys	Ser	Arg	Leu	455	460	465
His	Ala	Ala	Pro	Gly	Gly	Asp	Gly	Ser	Pro	Ile	Leu	Pro	Gly	Met	470	475	480
Val	Cys	Thr	Ser	Ala	Val	Gly	Glu	Leu	Pro	Ser	Cys	Glu	Gly	Leu	485	490	495
Ser	Gly	Ala	Pro	Leu	Val	His	Glu	Val	Arg	Gly	Thr	Trp	Phe	Leu	500	505	510
Ala	Gly	Leu	His	Ser	Phe	Gly	Asp	Ala	Cys	Gln	Gly	Pro	Ala	Arg	515	520	525
Pro	Ala	Val	Phe	Thr	Ala	Leu	Pro	Ala	Tyr	Glu	Asp	Trp	Val	Ser	530	535	540
Ser	Leu	Asp	Trp	Gln	Val	Tyr	Phe	Ala	Glu	Glu	Pro	Glu	Pro	Glu	545	550	555
Ala	Glu	Pro	Gly	Ser	Cys	Leu	Ala	Asn	Ile	Ser	Gln	Pro	Thr	Ser	560	565	570

Cys

<210> 133

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 133

cctgtgctgt gcctcgagcc tgac 24

<210> 134

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 134

gtgggcagca gttagcaccc cctc 24

<210> 135

<211> 45

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 135

ggctggcatc atcagctttg catcaagctg tgcccaggag gacgc 45

<210> 136

<211> 1998

<212> DNA

<213> Homo sapiens

<400> 136

cgggccgccc ccggccccca ttccggccgg gcctcgctgc ggccggcgact 50  
gagccaggct gggccgcgtc cctgagtccc agagtcggcg cggcgcggca 100  
ggggcagcct tccaccacgg ggagcccagc tgtcagccgc ctcacaggaa 150  
gatgctgcgt cggcggggca gccctggcat ggggtgtgcat gtgggtgcag 200  
ccctgggagc actgtggttc tgccctcacag gagccctgga ggtccaggtc 250  
cctgaagacc cagtgggtggc actgggtggc accgatgcca ccctgtgctg 300  
ctccttctcc cctgagcctg gcttcagcct ggcacagctc aacctcatct 350  
ggcagctgac agataccaaa cagctgggtg acagctttgc tgagggccag 400  
gaccagggca gcgcctatgc caaccgcacg gccctcttcc cggacctgct 450  
ggcacagggc aacgcattcc tgaggctgca gcgcgtgcgt gtggcggacg 500  
agggcagctt cacctgcttc gtgagcatcc gggatttcgg cagcgctgcc 550

gtcagcctgc aggtggccgc tccctactcg aagcccagca tgaccctgga 600  
gccaacaag gacctgcggc caggggacac ggtgaccatc acgtgctcca 650  
gctaccaggg ctaccctgag gctgaggtgt tctggcagga tgggcagggt 700  
gtgcccctga ctggcaacgt gaccacgtcg cagatggcca acgagcaggg 750  
cttgtttgat gtgcacagcg tcttgccgggt ggtgctgggt gcgaatggca 800  
cctacagctg cctggtgcgc aaccccgctg tgcagcagga tgcgcacrgc 850  
tctgtcacca tcacaggga gcctatgaca ttccccccag aggccctgtg 900  
ggtgaccgtg gggctgtctg tctgtctcat tgcaactgctg gtggccctgg 950  
ctttcgtgtg ctggagaaag atcaaacaga gctgtgagga ggagaatgca 1000  
ggagctgagg accaggatgg ggagggagaa ggctccaaga cagccctgca 1050  
gcctctgaaa cactctgaca gcaaagaaga tgatggacaa gaaatagcct 1100  
gaccatgagg accagggagc tgctaccctt ccctacagct cctaccctct 1150  
ggctgcaatg gggctgcact gtgagccctg cccccaacag atgcatcctg 1200  
ctctgacagg tgggtcctt ctccaaagga tgcgatacac agaccactgt 1250  
gcagccttat ttctccaatg gacatgattc ccaagtcac ctgctgcctt 1300  
ttttcttata gacacaatga acagaccacc cacaacctta gttctctaag 1350  
tcctcctgcc tgctgcctta tttcacagta catacatctt ttagggacac 1400  
agtacactga ccacatcacc accctcttct tccagtgtg cgtggaccat 1450  
ctggctgcct tttttctcca aaagatgcaa tattcagact gactgacccc 1500  
ctgccttatt tcaccaaaga cacgatgcat agtcaccccg gccttgtttc 1550  
tccaatggcc gtgatacact agtgatcatg ttcagccctg cttccacctg 1600  
catagaatct tttcttctca gacagggaca gtgcggcctc aacatctcct 1650  
ggagtctaga agctgtttcc tttccctcc ttcctccctg cccaagtga 1700  
agacaggga gggccaggaa tgctttgggg acaccgaggg gactgcccc 1750  
cacccccacc atggtgctat tctggggctg gggcagtctt ttctggctt 1800  
gcctctggcc agtcctggc ctctggtaga gtgagacttc agacgttctg 1850  
atgccttccg gatgtcatct ctccctgccc caggaatgga agatgtgagg 1900  
acttctaatt taaatgtggg actcggaggg attttgtaa ctgggggtat 1950



attttgggga aaataaatgt ctttgtaaaa aaaaaaaaaa aaaaaaaaa 1998

<210> 137

<211> 316

<212> PRT

<213> Homo sapiens

<220>

<221> unsure

<222> 233

<223> unknown amino acid

<400> 137

Met	Leu	Arg	Arg	Arg	Gly	Ser	Pro	Gly	Met	Gly	Val	His	Val	Gly
1				5					10					15

Ala	Ala	Leu	Gly	Ala	Leu	Trp	Phe	Cys	Leu	Thr	Gly	Ala	Leu	Glu
			20						25					30

Val	Gln	Val	Pro	Glu	Asp	Pro	Val	Val	Ala	Leu	Val	Gly	Thr	Asp
				35					40					45

Ala	Thr	Leu	Cys	Cys	Ser	Phe	Ser	Pro	Glu	Pro	Gly	Phe	Ser	Leu
			50						55					60

Ala	Gln	Leu	Asn	Leu	Ile	Trp	Gln	Leu	Thr	Asp	Thr	Lys	Gln	Leu
			65						70					75

Val	His	Ser	Phe	Ala	Glu	Gly	Gln	Asp	Gln	Gly	Ser	Ala	Tyr	Ala
			80						85					90

Asn	Arg	Thr	Ala	Leu	Phe	Pro	Asp	Leu	Leu	Ala	Gln	Gly	Asn	Ala
			95						100					105

Ser	Leu	Arg	Leu	Gln	Arg	Val	Arg	Val	Ala	Asp	Glu	Gly	Ser	Phe
			110						115					120

Thr	Cys	Phe	Val	Ser	Ile	Arg	Asp	Phe	Gly	Ser	Ala	Ala	Val	Ser
			125						130					135

Leu	Gln	Val	Ala	Ala	Pro	Tyr	Ser	Lys	Pro	Ser	Met	Thr	Leu	Glu
			140						145					150

Pro	Asn	Lys	Asp	Leu	Arg	Pro	Gly	Asp	Thr	Val	Thr	Ile	Thr	Cys
			155						160					165

Ser	Ser	Tyr	Gln	Gly	Tyr	Pro	Glu	Ala	Glu	Val	Phe	Trp	Gln	Asp
			170						175					180

Gly	Gln	Gly	Val	Pro	Leu	Thr	Gly	Asn	Val	Thr	Thr	Ser	Gln	Met
			185						190					195

Ala	Asn	Glu	Gln	Gly	Leu	Phe	Asp	Val	His	Ser	Val	Leu	Arg	Val
			200						205					210

Val	Leu	Gly	Ala	Asn	Gly	Thr	Tyr	Ser	Cys	Leu	Val	Arg	Asn	Pro
			215						220					225

Val	Leu	Gln	Gln	Asp	Ala	His	Xaa	Ser	Val	Thr	Ile	Thr	Gly	Gln	
				230					235					240	
Pro	Met	Thr	Phe	Pro	Pro	Glu	Ala	Leu	Trp	Val	Thr	Val	Gly	Leu	
				245					250					255	
Ser	Val	Cys	Leu	Ile	Ala	Leu	Leu	Val	Ala	Leu	Ala	Phe	Val	Cys	
				260					265					270	
Trp	Arg	Lys	Ile	Lys	Gln	Ser	Cys	Glu	Glu	Glu	Asn	Ala	Gly	Ala	
				275					280					285	
Glu	Asp	Gln	Asp	Gly	Glu	Gly	Glu	Gly	Ser	Lys	Thr	Ala	Leu	Gln	
				290					295					300	
Pro	Leu	Lys	His	Ser	Asp	Ser	Lys	Glu	Asp	Asp	Gly	Gln	Glu	Ile	
				305					310					315	

Ala

<210> 138

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 138

ctggcacagc tcaacctcat ctgg 24

<210> 139

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 139

gctgtctgtc tgtctcattg 20

<210> 140

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 140

ggacacagta tactgaccac 20

<210> 141

<211> 24

<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 141  
tgccaaccag gcagctgtaa gtgc 24

<210> 142  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 142  
tggaagaaga ggggtggtgat gtgg 24

<210> 143  
<211> 45  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 143  
cagctgacag acaccaaaca gctggtgcac agtttcaccg aaggc 45

<210> 144  
<211> 2336  
<212> DNA  
<213> Homo sapiens

<220>  
<221> unsure  
<222> 1620, 1673  
<223> unknown base

<400> 144  
ttcgtgaccc ttgagaaaag agttggtggt aaatgtgccg cgtcttctaa 50  
gaagggggag tctgaactt gtctgaagcc cttgtccgta agccttgaac 100  
tacgttctta aatctatgaa gtcgagggac ctttcgctgc tttttagagg 150  
acttctttcc ttgcttcagc aacatgaggc ttttcttggtg gaacgcggtc 200  
ttgactctgt tcgtcacttc tttgattggg gctttgatcc ctgaaccaga 250  
agtgaaaatt gaagttctcc agaagccatt catctgccat cgcaagacca 300  
aaggagggga tttgatgttg gtccactatg aaggctactt agaaaaggac 350  
ggctccttat ttcactccac tcacaaacat aacaatggtc agccatttg 400

gtttaccctg ggcacacctg aggcctctcaa aggttgggac cagggcttga 450  
aaggaatgtg tgtaggagag aagagaaagc tcatcattcc tcctgctctg 500  
ggctatggaa aagaaggaaa aggtaaaatt cccccagaaa gtacactgat 550  
atttaatat gatctcctgg agattcgaaa tggaccaaga tcccatgaat 600  
cattccaaga aatggatctt aatgatgact ggaaactctc taaagatgag 650  
gttaaagcat atttaagaa ggagtttgaa aaacatggtg cggtggtgaa 700  
tgaaagtcac catgatgctt tgggtggagga tatttttgat aaagaagatg 750  
aagacaaaaga tgggtttata tctgccagag aatttacata taaacacgat 800  
gagttataga gatacatcta cccttttaat atagcactca tctttcaaga 850  
gagggcagtc atctttaaag aacattttat tttatacaa tgttctttct 900  
tgctttgttt tttattttta tatatttttt ctgactccta tttaaagaac 950  
cccttaggtt tctaagtacc catttctttc tgataagtta ttgggaagaa 1000  
aaagctaatt ggtctttgaa tagaagactt ctggacaatt tttcactttc 1050  
acagatatga agctttgttt tactttctca cttataaatt taaaatgttg 1100  
caactgggaa tataccacga catgagacca ggttatagca caaattagca 1150  
ccctatatatt ctgcttccct ctattttctc caagttagag gtcaacattt 1200  
gaaaagcctt ttgcaatagc ccaaggcttg ctattttcat gttataatga 1250  
aatagtttat gtgtaactgg ctctgagtct ctgcttgagg accagaggaa 1300  
aatggttggt ggacctgact tgtaaatggc tactgcttta ctaaggagat 1350  
gtgcaatgct gaagttagaa acaaggttaa tagccaggca tgggtggtca 1400  
tgcttgaat cccagcactt tgggaggctg aggcgggagg atcacctgag 1450  
gttgggagtt cgagaccagc ctgaccaaca cggagaaacc ctatctctac 1500  
taaaaataca aagtagcccg gcgtggtgat gcgtgcctgt aatcccagct 1550  
accaggaag gctgaggcgg cagaatcact tgaacccgag gccgaggttg 1600  
cggtaaagccg agatcacctn cagcctggac actctgtctc gaaaaaagaa 1650  
aagaacacgg ttaataccat atnaatatgt atgcattgag acatgctacc 1700  
taggacttaa gctgatgaag cttggctcct agtgattggt ggcctattat 1750  
gataaatagg acaaatcatt tatgtgtgag tttctttgta ataaatgta 1800

tcaatatggt atagatgagg tagaaagtta tatttatatt caatatttac 1850  
 ttcttaaggc tagcggaata tccttcctgg ttctttaatg ggtagtctat 1900  
 agtatattat actacaataa cattgtatca taagataaag tagtaaacca 1950  
 gtctacattt tcccatctct gtctcatcaa aaactgaagt tagctgggtg 2000  
 tgggtggctca tgctgtaat ccagcactt tgggggccaa ggagggtgga 2050  
 tcacttgaga tcaggagtgc aagaccagcc tggccaacat ggtgaaacct 2100  
 tgtctctact aaaaatacaa aaattagcca ggcgtggtgg tgcacacctg 2150  
 tagtcccagc tactcgggag gctgagacag gagatttgct tgaacccggg 2200  
 aggcggaggt tgcagtgagc caagattgtg ccaactgcact ccagcctggg 2250  
 tgacagagca agactccatc tcaaaaaaaaa aaaaaagaag cagacctaca 2300  
 gcagctacta ttgaataaat acctatcctg gatttt 2336

<210> 145

<211> 211

<212> PRT

<213> Homo sapiens

<400> 145

Met	Arg	Leu	Phe	Leu	Trp	Asn	Ala	Val	Leu	Thr	Leu	Phe	Val	Thr	1	5	10	15
Ser	Leu	Ile	Gly	Ala	Leu	Ile	Pro	Glu	Pro	Glu	Val	Lys	Ile	Glu	20	25	30	
Val	Leu	Gln	Lys	Pro	Phe	Ile	Cys	His	Arg	Lys	Thr	Lys	Gly	Gly	35	40	45	
Asp	Leu	Met	Leu	Val	His	Tyr	Glu	Gly	Tyr	Leu	Glu	Lys	Asp	Gly	50	55	60	
Ser	Leu	Phe	His	Ser	Thr	His	Lys	His	Asn	Asn	Gly	Gln	Pro	Ile	65	70	75	
Trp	Phe	Thr	Leu	Gly	Ile	Leu	Glu	Ala	Leu	Lys	Gly	Trp	Asp	Gln	80	85	90	
Gly	Leu	Lys	Gly	Met	Cys	Val	Gly	Glu	Lys	Arg	Lys	Leu	Ile	Ile	95	100	105	
Pro	Pro	Ala	Leu	Gly	Tyr	Gly	Lys	Glu	Gly	Lys	Gly	Lys	Ile	Pro	110	115	120	
Pro	Glu	Ser	Thr	Leu	Ile	Phe	Asn	Ile	Asp	Leu	Leu	Glu	Ile	Arg	125	130	135	
Asn	Gly	Pro	Arg	Ser	His	Glu	Ser	Phe	Gln	Glu	Met	Asp	Leu	Asn	140	145	150	

Asp Asp Trp Lys Leu Ser Lys Asp Glu Val Lys Ala Tyr Leu Lys  
155 160 165

Lys Glu Phe Glu Lys His Gly Ala Val Val Asn Glu Ser His His  
170 175 180

Asp Ala Leu Val Glu Asp Ile Phe Asp Lys Glu Asp Glu Asp Lys  
185 190 195

Asp Gly Phe Ile Ser Ala Arg Glu Phe Thr Tyr Lys His Asp Glu  
200 205 210

Leu

<210> 146

<211> 26

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 146

ctttccttgc ttcagcaaca tgaggc 26

<210> 147

<211> 25

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 147

gcccagagca ggaggaatga tgagc 25

<210> 148

<211> 49

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 148

gtggaacgcg gtcttgactc tgttcgtcac ttctttgatt ggggctttg 49

<210> 149

<211> 2196

<212> DNA

<213> Homo sapiens

<400> 149

aataaagctt ccttaatggt gtatatgtct ttgaagtaca tccgtgcatt 50

tttttttagc atccaaccat tcttccttg tagttctgc ccctcaa 100  
caccctctcc cgtagccac ccgactaaca tctcagtctc tgaaaatgca 150  
cagagatgcc tggctacctc gccctgcctt cagcctcacg gggctcagtc 200  
tctttttctc tttggtgcca ccaggacgga gcatggaggt cacagtacct 250  
gccacctca acgtcctcaa tggctctgac gcccgctgc cctgcacctt 300  
caactcctgc tacacagtga accacaaaca gttctccctg aactggactt 350  
accaggagtg caacaactgc tctgaggaga tgttcctcca gttccgcatg 400  
aagatcatta acctgaagct ggagcggttt caagaccgcg tggagttctc 450  
agggaaacccc agcaagtacg atgtgtcggg gatgctgaga aacgtgcagc 500  
cggaggatga ggggatttac aactgctaca tcatgaaccc ccctgaccgc 550  
caccgtggcc atggcaagat ccatctgcag gtcctcatgg aagagcccc 600  
tgagcgggac tccacggtgg ccgtgattgt gggcgctcc gtcgggggct 650  
tcttggtgtg ggtcatcttg gtgctgatgg tggcaagtg tgtgaggaga 700  
aaaaaagagc agaagctgag cacagatgac ctgaagaccg aggaggagg 750  
caagacggac ggtgaaggca acccgatga tggcgccaag tagtgggtgg 800  
ccggccctgc agcctcccg gtcccgctctc ctccctctc cgccctgtac 850  
agtgaccctg cctgctcgt cttggtgtgc ttcccgtag ctaggacccc 900  
agggccacc tggggcctcc tgaacccccg acttcgtatc tcccaccctg 950  
caccaagagt gaccactct cttccatccg agaaacctgc catgctctgg 1000  
gacgtgtggg ccctggggag aggagagaaa gggctccac ctgccagtcc 1050  
ctggggggag gcaggaggca catgtgaggg tcccagaga gaaggagtg 1100  
ggtgggcagg ggtagaggag gggcgctgt cacctgcca gtgcttgct 1150  
ggcagtggct tcagagagga cctggtggg agggagggt ttctgtgt 1200  
gacagcgctc cctcaggagg gccttgccct ggcacggctg tgctcctcc 1250  
ctgctcccag ccagagcag ccatcaggct ggaggtgacg atgagttcct 1300  
gaaacttggg ggggcatgtt aaagggatga ctgtgcattc cagggcactg 1350  
acggaaagcc agggctgcag gcaaagctgg acatgtgcc tggcccagga 1400  
ggccatgttg ggccctcgtt tccattgcta gtggcctcct tggggctcct 1450  
gttggtcct aatcccttag gactgtggat gaggccagac tggaagagca 1500

gctccaggta gggggccatg tttcccagcg gggaccacc aacagaggcc 1550  
agtttcaaag tcagctgagg ggctgagggg tggggctcca tggatgaatgc 1600  
aggttgctgc aggtctctgcc ttctccatgg ggtaaccacc ctgcctctggg 1650  
caggggcagc caaggctggg aaatgaggag gccatgcaca ggggtgggca 1700  
gctttctttg gggcttcagt gagaactctc ccagttgccc ttgggtgggt 1750  
ttccacctgg cttttggcta cagagaggga agggaaagcc tgaggccggc 1800  
ataaggggag gccttggaac ctgagctgcc aatgccagcc ctgtcccatc 1850  
tgccggccag ctactcgctc ctctcccaac aactcccttc gtggggacaa 1900  
aagtgacaat tgtaggccag gcacagtggc tcacgcctgt aatcccagca 1950  
ctttgggagg ccaaggcggg tggattacct ccatctgttt agtagaaatg 2000  
ggcaaaaccc catctctact aaaaatacaa gaattagctg ggcgtggtgg 2050  
cgtgtgcctg taatcccagc tatttgggag gctgaggcag gagaatcgct 2100  
tgagcccggg aagcagaggt tgcaatgaac tgagatagt atagtccac 2150  
tgcaattcag cctgggtgac atagagagac tccatctcaa aaaaaa 2196

<210> 150

<211> 215

<212> PRT

<213> Homo sapiens

<400> 150

Met	His	Arg	Asp	Ala	Trp	Leu	Pro	Arg	Pro	Ala	Phe	Ser	Leu	Thr
1				5					10					15

Gly	Leu	Ser	Leu	Phe	Phe	Ser	Leu	Val	Pro	Pro	Gly	Arg	Ser	Met
				20					25					30

Glu	Val	Thr	Val	Pro	Ala	Thr	Leu	Asn	Val	Leu	Asn	Gly	Ser	Asp
				35					40					45

Ala	Arg	Leu	Pro	Cys	Thr	Phe	Asn	Ser	Cys	Tyr	Thr	Val	Asn	His
				50					55					60

Lys	Gln	Phe	Ser	Leu	Asn	Trp	Thr	Tyr	Gln	Glu	Cys	Asn	Asn	Cys
				65					70					75

Ser	Glu	Glu	Met	Phe	Leu	Gln	Phe	Arg	Met	Lys	Ile	Ile	Asn	Leu
				80					85					90

Lys	Leu	Glu	Arg	Phe	Gln	Asp	Arg	Val	Glu	Phe	Ser	Gly	Asn	Pro
				95					100					105

Ser	Lys	Tyr	Asp	Val	Ser	Val	Met	Leu	Arg	Asn	Val	Gln	Pro	Glu
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----



110	115	120
Asp Glu Gly Ile Tyr Asn Cys Tyr Ile Met Asn Pro Pro Asp Arg		
125	130	135
His Arg Gly His Gly Lys Ile His Leu Gln Val Leu Met Glu Glu		
140	145	150
Pro Pro Glu Arg Asp Ser Thr Val Ala Val Ile Val Gly Ala Ser		
155	160	165
Val Gly Gly Phe Leu Ala Val Val Ile Leu Val Leu Met Val Val		
170	175	180
Lys Cys Val Arg Arg Lys Lys Glu Gln Lys Leu Ser Thr Asp Asp		
185	190	195
Leu Lys Thr Glu Glu Glu Gly Lys Thr Asp Gly Glu Gly Asn Pro		
200	205	210
Asp Asp Gly Ala Lys		
215		

<210> 151  
 <211> 524  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> unsure  
 <222> 103, 233  
 <223> unknown base

<400> 151  
 gttgtatatg tcttgaagta catccgtgca ttttttttag catccaacca 50  
 tcttcccttg tagttctcgc cccctcaaata caccttctcc cttagcccac 100  
 ccnactaaca tctcagtctc tgaaaatgca cagagatgcc tggctacctc 150  
 gccctgcctt cagcctcacg gggctcagtc tctttttctc tttggtgcca 200  
 ccaggacgga gcatggaggt ccacagtacc tgnccaccct caacgtcctc 250  
 aatggctctg acgcccgcct gccctgcctt tcaactcctg ctacacagtg 300  
 aaccacaaac agttctccct gaactggact taccaggagt gcaacaactg 350  
 ctctgaggag atgttctctc agttccgcat gaagatcatt aacctgaagc 400  
 tggagcgggt tcaagaccgc gtggagttct cagggaaccc cagcaagtac 450  
 gatgtgtcgg tgatgctgag aaacgtgcag ccggaggatg aggggattta 500  
 caactgctac atcatgaacc cccc 524

<210> 152

<211> 368  
<212> DNA  
<213> Homo sapiens

<220>  
<221> unsure  
<222> 56, 123  
<223> unknown base

<400> 152  
tcacggggct catctctttt tctctttggt gccaccagg acggagcatg 50  
gaggtncaca tacctgccac cctcaacgtc ctcaatggct ttgacgcccg 100  
cctgccctgc accttcaact ccngctacac agtgaaccac aaacagttct 150  
ccctgaactg gatttaccag gagtgcaaca actggctctg aggagatggt 200  
cctccagttc ccgcatggaa gatcatttaa cctgaaagct ggaagcgggt 250  
ttcaagaacc gcgtggaagt ttctcaggga accccagcaa gtacgatgtg 300  
tcggtgatgc tgagaaacgt gcagccggag gatgagggga ttacaactg 350  
ctacatcatg aaccccc 368

<210> 153  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 153  
acggagcatg gaggtccaca gtac 24

<210> 154  
<211> 23  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 154  
gcacgtttct cagcatcacc gac 23

<210> 155  
<211> 50  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 155

cgcttgcctt gcaccttcaa ctctgtctac acagtgaacc acaaacagtt 50

<210> 156  
 <211> 2680  
 <212> DNA  
 <213> Homo sapiens

<400> 156  
 tgcggcgacc gtgtgtacacc atgggcctcc acctccgccc ctaccgtgtg 50  
 gggctgtctcc cggatggcct cctgttcctc ttgtgtgtgc taatgtgtgt 100  
 cgcgggaccca gcgtctcccg ccggacgtca cccccagtg gtgtgtgtcc 150  
 ctggtgattt gggtaaccaa ctggaagcca agctggacaa gccgacagt 200  
 gtgcactacc tctgtccaa gaagaccgaa agctacttca caatctggct 250  
 gaacctggaa ctgtgtgtgc ctgtcatcat tgactgtgtg attgacaata 300  
 tcaggctggt ttacaacaaa acatccagg ccaccagtt tctgtgtgt 350  
 gtggatgtac gtgtccctgg ctttgggaag accttctcac tggagttcct 400  
 ggaccccagc aaaagcagcg tgggttccta tttccacacc atggtggaga 450  
 gccttgtggg ctggggctac acacgggggt aggatgtccg aggggctccc 500  
 tatgactggc gccgagcccc aaatgaaaac gggccctact tctggccct 550  
 ccgcgagatg atcgaggaga tgtaccagct gtatgggggc cccgtggtgc 600  
 tggttgcca cagtatgggc aacatgtaca cgctctactt tctgcagcgg 650  
 cagccgcagg cctggaagga caagtatatc cgggccttcg tgtcactggg 700  
 tgcgccctgg gggggcgtgg ccaagaccct gcgcgtcctg gcttcaggag 750  
 acaacaaccg gatcccagtc atcgggcccc tgaagatccg ggagcagcag 800  
 cggtcagctg tctccaccag ctggctgtgc ccctacaact acacatggtc 850  
 acctgagaag gtgttcgtgc agacaccac aatcaactac aactgcggg 900  
 actaccgcaa gttcttccag gacatcggct ttgaagatgg ctggctcatg 950  
 cggcaggaca cagaagggtt ggtggaagcc acgatgccac ctggcgtgca 1000  
 gctgcactgc ctctatggta ctggcgtccc cacaccagac tcttctact 1050  
 atgagagctt ccctgaccgt gaccctaaaa tctgctttgg tgacggcgat 1100  
 ggtactgtga acttgaagag tgccctgcag tgccaggcct ggcagagccg 1150  
 ccaggagcac caagtgttgc tgcaggagct gccaggcagc gagcacatcg 1200  
 agatgctggc caacgccacc accctggcct atctgaaacg tgtgtcctt 1250

gggccctgac tcctgtgcca caggactcct gtggctcggc cgtggacctg 1300  
ctgttggcct ctggggctgt catggcccac gcgttttgca aagtttgtga 1350  
ctcaccattc aaggccccga gtcttgact gtgaagcatc tgccatgggg 1400  
aagtgtgtt tgttatcctt tctctgtggc agtgaagaag gaagaaatga 1450  
gagtctagac tcaagggaca ctggatggca agaagctgc tgatggtgga 1500  
actgtgtga ccttaggact ggctccacag ggtggactgg ctgggccctg 1550  
gtcccagtcc ctgcctgggg ccattgtgcc ccctattcct gtgggctttt 1600  
catacttgcc tactggggcc tggccccgca gccttcctat gagggatgtt 1650  
actgggctgt ggtcctgtac ccagaggctc cagggatcgg ctctggccc 1700  
ctcgggtgac ccttcccaca caccagccac agataggcct gccactggtc 1750  
atgggtagct agagctgctg gcttcctgt ggcttagctg gtggccagcc 1800  
tgactggctt cctgggcgag cctagtagct cctgcaggca ggggcagttt 1850  
gttgcttct tcgtggttcc caggccctgg gacatctcac tccactccta 1900  
cctcccttac caccaggagc attcaagctc tggattgggc agcagatgtg 1950  
ccccagtc cgcaggctgt gttccagggg ccctgatttc ctcgatgtg 2000  
ctattggccc caggactgaa gctgcctccc ttcacctgg gactgtggtt 2050  
ccaaggatga gagcaggggt tggagccatg gccttctggg aacctatgga 2100  
gaaagggaat ccaaggaagc agccaaggct gctcgcagct tccctgagct 2150  
gcacctcttg ctaacccac catcacactg ccacctgcc ctagggtctc 2200  
actagtacca agtgggtcag cacagggtg aggatggggc tcctatccac 2250  
cctggccagc acccagctta gtgctgggac tagcccagaa acttgaatgg 2300  
gacctgaga gagccagggg tcccctgagg cccccctagg ggctttctgt 2350  
ctgccccagg gtgctccatg gatctccctg tggcagcagg catggagagt 2400  
cagggtgcc ttcattggcag taggtcttaa gtgggtgact ggccacaggc 2450  
cgagaaaagg gtacagcctc taggtggggg tcccaaagac gccttcaggc 2500  
tggaactgag tgctctccca cagggtttct gtgcagctgg attttctctg 2550  
ttgcatacat gcctggcatc tgtctcccct tgttctgag tggccccaca 2600  
tggggtctg agcaggctgt atctggattc tggcaataaa agtactctgg 2650

atgctgtaaa aaaaaaaaaa aaaaaaaaaa 2680

<210> 157

<211> 412

<212> PRT

<213> Homo Sapien

<400> 157

Met	Gly	Leu	His	Leu	Arg	Pro	Tyr	Arg	Val	Gly	Leu	Leu	Pro	Asp	
1				5					10					15	
Gly	Leu	Leu	Phe	Leu	Leu	Leu	Leu	Leu	Met	Leu	Leu	Ala	Asp	Pro	
				20					25					30	
Ala	Leu	Pro	Ala	Gly	Arg	His	Pro	Pro	Val	Val	Leu	Val	Pro	Gly	
				35					40					45	
Asp	Leu	Gly	Asn	Gln	Leu	Glu	Ala	Lys	Leu	Asp	Lys	Pro	Thr	Val	
				50					55					60	
Val	His	Tyr	Leu	Cys	Ser	Lys	Lys	Thr	Glu	Ser	Tyr	Phe	Thr	Ile	
				65					70					75	
Trp	Leu	Asn	Leu	Glu	Leu	Leu	Leu	Pro	Val	Ile	Ile	Asp	Cys	Trp	
				80					85					90	
Ile	Asp	Asn	Ile	Arg	Leu	Val	Tyr	Asn	Lys	Thr	Ser	Arg	Ala	Thr	
				95					100					105	
Gln	Phe	Pro	Asp	Gly	Val	Asp	Val	Arg	Val	Pro	Gly	Phe	Gly	Lys	
				110					115					120	
Thr	Phe	Ser	Leu	Glu	Phe	Leu	Asp	Pro	Ser	Lys	Ser	Ser	Val	Gly	
				125					130					135	
Ser	Tyr	Phe	His	Thr	Met	Val	Glu	Ser	Leu	Val	Gly	Trp	Gly	Tyr	
				140					145					150	
Thr	Arg	Gly	Glu	Asp	Val	Arg	Gly	Ala	Pro	Tyr	Asp	Trp	Arg	Arg	
				155					160					165	
Ala	Pro	Asn	Glu	Asn	Gly	Pro	Tyr	Phe	Leu	Ala	Leu	Arg	Glu	Met	
				170					175					180	
Ile	Glu	Glu	Met	Tyr	Gln	Leu	Tyr	Gly	Gly	Pro	Val	Val	Leu	Val	
				185					190					195	
Ala	His	Ser	Met	Gly	Asn	Met	Tyr	Thr	Leu	Tyr	Phe	Leu	Gln	Arg	
				200					205					210	
Gln	Pro	Gln	Ala	Trp	Lys	Asp	Lys	Tyr	Ile	Arg	Ala	Phe	Val	Ser	
				215					220					225	
Leu	Gly	Ala	Pro	Trp	Gly	Gly	Val	Ala	Lys	Thr	Leu	Arg	Val	Leu	
				230					235					240	
Ala	Ser	Gly	Asp	Asn	Asn	Arg	Ile	Pro	Val	Ile	Gly	Pro	Leu	Lys	

	245		250		255
Ile Arg Glu Gln	Gln Arg Ser Ala Val	Ser Thr Ser Trp Leu	Leu		
	260	265		270	
Pro Tyr Asn Tyr	Thr Trp Ser Pro Glu	Lys Val Phe Val Gln	Thr		
	275	280		285	
Pro Thr Ile Asn	Tyr Thr Leu Arg Asp	Tyr Arg Lys Phe Phe	Gln		
	290	295		300	
Asp Ile Gly Phe	Glu Asp Gly Trp Leu	Met Arg Gln Asp Thr	Glu		
	305	310		315	
Gly Leu Val Glu	Ala Thr Met Pro Pro	Gly Val Gln Leu His	Cys		
	320	325		330	
Leu Tyr Gly Thr	Gly Val Pro Thr Pro	Asp Ser Phe Tyr Tyr	Glu		
	335	340		345	
Ser Phe Pro Asp	Arg Asp Pro Lys Ile	Cys Phe Gly Asp Gly	Asp		
	350	355		360	
Gly Thr Val Asn	Leu Lys Ser Ala Leu	Gln Cys Gln Ala Trp	Gln		
	365	370		375	
Ser Arg Gln Glu	His Gln Val Leu Leu	Gln Glu Leu Pro Gly	Ser		
	380	385		390	
Glu His Ile Glu	Met Leu Ala Asn Ala	Thr Thr Leu Ala Tyr	Leu		
	395	400		405	
Lys Arg Val Leu	Leu Gly Pro				
	410				

<210> 158  
 <211> 23  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 158  
 ctggggctac acacggggtg agg 23

<210> 159  
 <211> 24  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 159  
 ggtgccgctg cagaaagtag agcg 24

<210> 160  
<211> 45  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 160  
gccccaaatg aaaacgggcc ctacttcctg gccctccgcg agatg 45

<210> 161  
<211> 1512  
<212> DNA  
<213> Homo sapiens

<400> 161  
cgagcgcgtg ggcggacgcg tggggcggcg gcagcggcgg cgacggcgac 50  
atggagagcg gggcctacgg cgcggccaag gcgggaggct ccttcgacct 100  
gcggcgcttc ctgacgcagc cgcaggtggt ggcgcgcgcc gtgtgcttgg 150  
tcttcgcctt gatcgtgttc tcctgcatct atggtgaggg ctacagcaat 200  
gccacgagt ctaagcagat gtactgcgtg ttcaaccgca acgaggatgc 250  
ctgccgctat ggcagtgcca tcgggtgctt ggcttcctg gcctcggcct 300  
tcttcttggt ggtcgacgcg tatttcccc agatcagcaa cgccactgac 350  
cgcaagtacc tggtcattgg tgacctgctc ttctcagctc tctggacctt 400  
cctgtggttt gttggtttct gcttcctcac caaccagtgg gcagtcacca 450  
acccgaagga cgtgctgggtg ggggccgact ctgtgagggc agccatcacc 500  
ttcagcttct tttccatctt ctctgggggt gtgctggcct ccctggccta 550  
ccagcgctac aaggctggcg tggacgactt catccagaat tacgttgacc 600  
cactccgga ccccaacact gcctacgcct cctaccagg tgcatctgtg 650  
gacaactacc aacagccacc cttacccag aacgcggaga ccaccgaggg 700  
ctaccagccg cccctgtgt actgagtggc ggtagcgtg ggaaggggga 750  
cagagagggc cctccctctt gccctggact ttcccatcag cctcctggaa 800  
ctgccagccc ctctctttca cctgttccat cctgtgcagc tgacacacag 850  
ctaaggagcc tcatagcctg gcgggggctg gcagagccac accccaagtg 900  
cctgtgccc aagggcttca gtcagccgct cactcctcca gggcactttt 950  
aggaaagggt ttttagctag tgttttcct cgcttttaat gacctcagcc 1000

ccgcctgcag tggctagaag ccagcaggtg cccatgtgct actgacaagt 1050  
 gcctcagctt cccccggcc cgggtcaggc cgtgggagcc gctattatct 1100  
 gcgttctctg ccaaagactc gtggggggcca tcacacctgc cctgtgcagc 1150  
 ggagccggac caggctcttg tgcctcact caggtttgct tcccctgtgc 1200  
 cactgctgt atgatctggg ggccaccacc ctgtgccggt ggcctctggg 1250  
 ctgcctcccg tgggtgtgagg gcggggctgg tgctcatggc acttcctcct 1300  
 tgctcccacc cctggcagca gggaagggtt ttgcctgaca acaccagct 1350  
 ttatgtaaatt attctgcagt tgttacttag gaagcctggg gagggcaggg 1400  
 gtgccccatg gctcccagac tctgtctgtg ccgagtgtat tataaaatcg 1450  
 tgggggagat gcccggcctg ggatgctggt tggagacgga ataaatgttt 1500  
 tctcattcaa ag 1512

<210> 162

<211> 224

<212> PRT

<213> Homo sapiens

<400> 162

Met	Glu	Ser	Gly	Ala	Tyr	Gly	Ala	Ala	Lys	Ala	Gly	Gly	Ser	Phe	1	5	10	15
Asp	Leu	Arg	Arg	Phe	Leu	Thr	Gln	Pro	Gln	Val	Val	Ala	Arg	Ala	20	25	30	
Val	Cys	Leu	Val	Phe	Ala	Leu	Ile	Val	Phe	Ser	Cys	Ile	Tyr	Gly	35	40	45	
Glu	Gly	Tyr	Ser	Asn	Ala	His	Glu	Ser	Lys	Gln	Met	Tyr	Cys	Val	50	55	60	
Phe	Asn	Arg	Asn	Glu	Asp	Ala	Cys	Arg	Tyr	Gly	Ser	Ala	Ile	Gly	65	70	75	
Val	Leu	Ala	Phe	Leu	Ala	Ser	Ala	Phe	Phe	Leu	Val	Val	Asp	Ala	80	85	90	
Tyr	Phe	Pro	Gln	Ile	Ser	Asn	Ala	Thr	Asp	Arg	Lys	Tyr	Leu	Val	95	100	105	
Ile	Gly	Asp	Leu	Leu	Phe	Ser	Ala	Leu	Trp	Thr	Phe	Leu	Trp	Phe	110	115	120	
Val	Gly	Phe	Cys	Phe	Leu	Thr	Asn	Gln	Trp	Ala	Val	Thr	Asn	Pro	125	130	135	
Lys	Asp	Val	Leu	Val	Gly	Ala	Asp	Ser	Val	Arg	Ala	Ala	Ile	Thr	140	145	150	



Phe Ser Phe Phe Ser Ile Phe Ser Trp Gly Val Leu Ala Ser Leu  
155 160 165

Ala Tyr Gln Arg Tyr Lys Ala Gly Val Asp Asp Phe Ile Gln Asn  
170 175 180

Tyr Val Asp Pro Thr Pro Asp Pro Asn Thr Ala Tyr Ala Ser Tyr  
185 190 195

Pro Gly Ala Ser Val Asp Asn Tyr Gln Gln Pro Pro Phe Thr Gln  
200 205 210

Asn Ala Glu Thr Thr Glu Gly Tyr Gln Pro Pro Pro Val Tyr  
215 220

<210> 163

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 163

tggtcttcgc cttgatcgtg ttct 24

<210> 164

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 164

gtgtactgag cggcgggtag 20

<210> 165

<211> 23

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 165

ctgaaggtga tggctgccct cac 23

<210> 166

<211> 23

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 166

ccaggaggct catgggaaag tcc 23

<210> 167

<211> 50

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 167

ccacgagtct aagcagatgt actgcgtgtt caaccgcaac gaggatgcct 50

<210> 168

<211> 3143

<212> DNA

<213> Homo sapiens

<400> 168

gagccaccta cctgtctccg aggccaggcc tgcagggcct catcggccag 50  
agggtgatca gtgagcagaa ggatgcccgt ggccgaggcc cccaggtgg 100  
ctggcgggca gggggacgga ggtgatggcg aggaagcgga gccagagggg 150  
atgttcaagg cctgtgagga ctccaagaga aaagcccggg gctacctccg 200  
cctggtgccc ctgtttgtgc tgctggccct gctcgtgctg gcttcggcgg 250  
gggtgctact ctggtatttc ctagggtaca aggcggaggt gatggtcagc 300  
caggtgtact caggcagtct gcgtgtactc aatcgccact tctcccagga 350  
tcttaccgcg cggaatcta gtgccttccg cagtgaacc gccaaagccc 400  
agaagatgct caaggagctc atcaccagca cccgcctggg aacttactac 450  
aactccagct ccgtctattc ctttggggag ggacccctca cctgcttctt 500  
ctggttcatt ctccaaatcc ccgagcaccg ccggctgatg ctgagccccg 550  
agggtgtgca ggcactgctg gtggaggagc tgctgtccac agtcaacagc 600  
tcggctgccg tcccctacag ggccgagtac gaagtggacc ccgagggcct 650  
agtgatcctg gaagccagtg tgaaagacat agctgcattg aattccacgc 700  
tggtttgtta ccgtacagc tacgtgggcc agggccaggt cctccggctg 750  
aaggggcctg accacctggc ctccagctgc ctgtggcacc tgcagggcc 800  
caaggacctc atgctcaaac tccggctgga gtggacgctg gcagagtgcc 850  
gggaccgact ggccatgtat gacgtggccg ggcccctgga gaagaggctc 900  
atcacctcgg tgtacggctg cagccgccag gagcccgtgg tggaggttct 950

ggcgtcgggg gccatcatgg cggtcgtctg gaagaagggc ctgcacagct 1000  
actacgaccc cttcgtgctc tccgtgcagc cggtggtctt ccaggcctgt 1050  
gaagtgaacc tgacgctgga caacaggctc gactcccagg gcgtcctcag 1100  
caccocgtac ttccccagct actactcgcc ccaaaaccac tgctcctggc 1150  
acctcacggt gccctctctg gactacggct tggccctctg gtttgatgcc 1200  
tatgcactga ggaggcagaa gtatgatttg ccgtgcaccc agggccagt 1250  
gacgatccag aacaggaggc tgtgtggctt gcgcacctcag cagccctacg 1300  
ccgagaggat ccccggtgtg gccacggccg ggatcaccat caacttcacc 1350  
tcccagatct ccctcaccgg gcccggtgtg cgggtgcact atggcttgta 1400  
caaccagtgc gaccctcgcc ctggagagtt cctctgttct gtgaatggac 1450  
tctgtgtccc tgccgtgatg ggggtcaagg actgccccaa cggcctggat 1500  
gagagaaaact gcgtttgcag agccacattc cagtgc aaaag aggacagcac 1550  
atgcatctca ctgccc aagg tctgtgatgg gcagcctgat tgtctcaacg 1600  
gcagcgatga agagcagtg caggaagggg tgccatgtgg gacattcacc 1650  
ttccagtgtg aggaccggag ctgcgtgaag aagcccaacc cgcagtgtga 1700  
tgggcgggcc gactgcaggg acggctcgga tgaggagcac tgtgactgtg 1750  
gcctccaggg ccctccagc cgcattgttg gtggagctgt gtcctccag 1800  
ggtgagtggc catggcaggc cagcctccag gttcggggtc gacacatctg 1850  
tgggggggcc ctcatcgctg accgctgggt gataacagct gccactgct 1900  
tccaggagga cagcatggcc tccacggctg tgtggaccgt gttcctgggc 1950  
aaggtgtggc agaactcgcg ctggcctgga gaggtgtcct tcaaggtgag 2000  
ccgcctgctc ctgcacccgt accacgaaga ggacagccat gactacgacg 2050  
tggcgtgct gcagctcgac caccgggtg tgcgctcggc cgcgtgcgc 2100  
cccgtctgcc tgcccgcgcg ctcccacttc ttcgagcccg gcctgcactg 2150  
ctggattacg ggctggggcg ccttgcgcgga gggcgggccc atcagcaacg 2200  
ctctgcagaa agtggatgtg cagttgatcc cacaggacct gtgcagcgag 2250  
gcctatcgct accaggtgac gccacgcatg ctgtgtgccg gctaccgcaa 2300  
gggcaagaag gatgcctgtc aggtgactc aggtggtccg ctggtgtgca 2350

aggcactcag tggccgctgg ttcttggcgg ggctggtcag ctggggcctg 2400  
 ggctgtggcc ggcctaacta cttcggcgctc tacaccogca tcacaggtgt 2450  
 gatcagctgg atccagcaag tggtagacctg aggaactgcc cccctgcaaa 2500  
 gcagggccca cctcctggac tcagagagcc cagggcaact gccaagcagg 2550  
 gggacaagta ttctggcggg ggggtggggga gagagcaggc cctgtggtgg 2600  
 caggaggtgg catcttgtct cgtccctgat gtctgctcca gtgatggcag 2650  
 gaggatggag aagtgccagc agctgggggt caagacgtcc cctgaggacc 2700  
 caggcccaca cccagccctt ctgcctccca attctctctc ctccgtcccc 2750  
 ttctccact gctgcctaata gcaaggcagt ggctcagcag caagaatgct 2800  
 ggttctacat cccgaggagt gtctgaggtg cgccccactc tgtacagagg 2850  
 ctgtttgggc agccttgctt ccagagagca gattccagct tcggaagccc 2900  
 ctggtctaac ttgggatctg ggaatggaag gtgctcccat cggagggggac 2950  
 cctcagagcc ctggagactg ccaggtgggc ctgctgccac tgtaagccaa 3000  
 aagggtggga agtctgact ccaggtgctt tgccccaccc ctgcctgcca 3050  
 cctgggccct cacagcccag accctcactg ggaggtgagc tcagctgccc 3100  
 tttggaataa agctgcctga tcaaaaaaaaa aaaaaaaaaa aaa 3143

<210> 169

<211> 802

<212> PRT

<213> Homo sapiens

<400> 169

Met	Pro	Val	Ala	Glu	Ala	Pro	Gln	Val	Ala	Gly	Gly	Gln	Gly	Asp
1				5					10					15
Gly	Gly	Asp	Gly	Glu	Glu	Ala	Glu	Pro	Glu	Gly	Met	Phe	Lys	Ala
			20						25					30
Cys	Glu	Asp	Ser	Lys	Arg	Lys	Ala	Arg	Gly	Tyr	Leu	Arg	Leu	Val
			35						40					45
Pro	Leu	Phe	Val	Leu	Leu	Ala	Leu	Leu	Val	Leu	Ala	Ser	Ala	Gly
			50						55					60
Val	Leu	Leu	Trp	Tyr	Phe	Leu	Gly	Tyr	Lys	Ala	Glu	Val	Met	Val
			65						70					75
Ser	Gln	Val	Tyr	Ser	Gly	Ser	Leu	Arg	Val	Leu	Asn	Arg	His	Phe
			80						85					90
Ser	Gln	Asp	Leu	Thr	Arg	Arg	Glu	Ser	Ser	Ala	Phe	Arg	Ser	Glu

	95	100	105
Thr Ala Lys Ala Gln Lys Met Leu Lys Glu Leu Ile Thr Ser Thr	110	115	120
Arg Leu Gly Thr Tyr Tyr Asn Ser Ser Ser Val Tyr Ser Phe Gly	125	130	135
Glu Gly Pro Leu Thr Cys Phe Phe Trp Phe Ile Leu Gln Ile Pro	140	145	150
Glu His Arg Arg Leu Met Leu Ser Pro Glu Val Val Gln Ala Leu	155	160	165
Leu Val Glu Glu Leu Leu Ser Thr Val Asn Ser Ser Ala Ala Val	170	175	180
Pro Tyr Arg Ala Glu Tyr Glu Val Asp Pro Glu Gly Leu Val Ile	185	190	195
Leu Glu Ala Ser Val Lys Asp Ile Ala Ala Leu Asn Ser Thr Leu	200	205	210
Gly Cys Tyr Arg Tyr Ser Tyr Val Gly Gln Gly Gln Val Leu Arg	215	220	225
Leu Lys Gly Pro Asp His Leu Ala Ser Ser Cys Leu Trp His Leu	230	235	240
Gln Gly Pro Lys Asp Leu Met Leu Lys Leu Arg Leu Glu Trp Thr	245	250	255
Leu Ala Glu Cys Arg Asp Arg Leu Ala Met Tyr Asp Val Ala Gly	260	265	270
Pro Leu Glu Lys Arg Leu Ile Thr Ser Val Tyr Gly Cys Ser Arg	275	280	285
Gln Glu Pro Val Val Glu Val Leu Ala Ser Gly Ala Ile Met Ala	290	295	300
Val Val Trp Lys Lys Gly Leu His Ser Tyr Tyr Asp Pro Phe Val	305	310	315
Leu Ser Val Gln Pro Val Val Phe Gln Ala Cys Glu Val Asn Leu	320	325	330
Thr Leu Asp Asn Arg Leu Asp Ser Gln Gly Val Leu Ser Thr Pro	335	340	345
Tyr Phe Pro Ser Tyr Tyr Ser Pro Gln Thr His Cys Ser Trp His	350	355	360
Leu Thr Val Pro Ser Leu Asp Tyr Gly Leu Ala Leu Trp Phe Asp	365	370	375
Ala Tyr Ala Leu Arg Arg Gln Lys Tyr Asp Leu Pro Cys Thr Gln			

380										385					390				
Gly	Gln	Trp	Thr	Ile	Gln	Asn	Arg	Arg	Leu	Cys	Gly	Leu	Arg	Ile					
				395					400					405					
Leu	Gln	Pro	Tyr	Ala	Glu	Arg	Ile	Pro	Val	Val	Ala	Thr	Ala	Gly					
				410					415					420					
Ile	Thr	Ile	Asn	Phe	Thr	Ser	Gln	Ile	Ser	Leu	Thr	Gly	Pro	Gly					
				425					430					435					
Val	Arg	Val	His	Tyr	Gly	Leu	Tyr	Asn	Gln	Ser	Asp	Pro	Cys	Pro					
				440					445					450					
Gly	Glu	Phe	Leu	Cys	Ser	Val	Asn	Gly	Leu	Cys	Val	Pro	Ala	Cys					
				455					460					465					
Asp	Gly	Val	Lys	Asp	Cys	Pro	Asn	Gly	Leu	Asp	Glu	Arg	Asn	Cys					
				470					475					480					
Val	Cys	Arg	Ala	Thr	Phe	Gln	Cys	Lys	Glu	Asp	Ser	Thr	Cys	Ile					
				485					490					495					
Ser	Leu	Pro	Lys	Val	Cys	Asp	Gly	Gln	Pro	Asp	Cys	Leu	Asn	Gly					
				500					505					510					
Ser	Asp	Glu	Glu	Gln	Cys	Gln	Glu	Gly	Val	Pro	Cys	Gly	Thr	Phe					
				515					520					525					
Thr	Phe	Gln	Cys	Glu	Asp	Arg	Ser	Cys	Val	Lys	Lys	Pro	Asn	Pro					
				530					535					540					
Gln	Cys	Asp	Gly	Arg	Pro	Asp	Cys	Arg	Asp	Gly	Ser	Asp	Glu	Glu					
				545					550					555					
His	Cys	Asp	Cys	Gly	Leu	Gln	Gly	Pro	Ser	Ser	Arg	Ile	Val	Gly					
				560					565					570					
Gly	Ala	Val	Ser	Ser	Glu	Gly	Glu	Trp	Pro	Trp	Gln	Ala	Ser	Leu					
				575					580					585					
Gln	Val	Arg	Gly	Arg	His	Ile	Cys	Gly	Gly	Ala	Leu	Ile	Ala	Asp					
				590					595					600					
Arg	Trp	Val	Ile	Thr	Ala	Ala	His	Cys	Phe	Gln	Glu	Asp	Ser	Met					
				605					610					615					
Ala	Ser	Thr	Val	Leu	Trp	Thr	Val	Phe	Leu	Gly	Lys	Val	Trp	Gln					
				620					625					630					
Asn	Ser	Arg	Trp	Pro	Gly	Glu	Val	Ser	Phe	Lys	Val	Ser	Arg	Leu					
				635					640					645					
Leu	Leu	His	Pro	Tyr	His	Glu	Glu	Asp	Ser	His	Asp	Tyr	Asp	Val					
				650					655					660					
Ala	Leu	Leu	Gln	Leu	Asp	His	Pro	Val	Val	Arg	Ser	Ala	Ala	Val					

665	670	675
Arg Pro Val Cys Leu Pro Ala Arg Ser His Phe Phe Glu Pro Gly		
680	685	690
Leu His Cys Trp Ile Thr Gly Trp Gly Ala Leu Arg Glu Gly Gly		
695	700	705
Pro Ile Ser Asn Ala Leu Gln Lys Val Asp Val Gln Leu Ile Pro		
710	715	720
Gln Asp Leu Cys Ser Glu Ala Tyr Arg Tyr Gln Val Thr Pro Arg		
725	730	735
Met Leu Cys Ala Gly Tyr Arg Lys Gly Lys Lys Asp Ala Cys Gln		
740	745	750
Gly Asp Ser Gly Gly Pro Leu Val Cys Lys Ala Leu Ser Gly Arg		
755	760	765
Trp Phe Leu Ala Gly Leu Val Ser Trp Gly Leu Gly Cys Gly Arg		
770	775	780
Pro Asn Tyr Phe Gly Val Tyr Thr Arg Ile Thr Gly Val Ile Ser		
785	790	795
Trp Ile Gln Gln Val Val Thr		
800		

<210> 170

<211> 1327

<212> DNA

<213> Homo sapiens

<400> 170

```

gcacccaggg ccagtggacg atccagaaca ggaggctgtg tggcttgccg 50
atcctgcagc cctacgccga gaggatcccc gtggtggcca cggccgggat 100
caccatcaac ttcacctccc agatctccct caccgggccc ggtgtgcggg 150
tgactatgg cttgtacaac cagtcggacc cctgccctgg agagttcctc 200
tgttctgtga atggactctg tgtccctgcc tgtgatgggg tcaaggactg 250
ccccaacggc ctggatgaga gaaactgcgt ttgcagagcc acattccagt 300
gcaaagagga cagcacatgc atctcactgc ccaaggtctg tgatgggcag 350
cctgattgtc tcaacggcag cgatgaagag cagtgccagg aaggggtgcc 400
atgtgggaca ttcaccttcc agtgtgagga ccggagctgc gtgaagaagc 450
ccaacccgca gtgtgatggg cgccccgact gcagggacgg ctcgatgag 500
gagcactgtg actgtggcct ccagggcccc tccagccgca ttgttggtgg 550

```

agctgtgtcc tccgaggggtg agtggccatg gcaggccagc ctccagggtc 600  
 ggggtcgaca catctgtggg ggggccctca tcgctgaccg ctgggtgata 650  
 acagctgccc actgcttcca ggaggacagc atggcctcca cgggtgctgtg 700  
 gaccgtgttc ctgggcaagg tgtggcagaa ctgcgctgg cctggagagg 750  
 tgtccttcaa ggtgagccgc ctgctcctgc acccgtaacca cgaagaggac 800  
 agccatgact acgacgtggc gctgctgcag ctcgaccacc cgggtggtgcg 850  
 ctgggccgcc gtgcgccccg tctgcctgcc cgcgcgctcc cacttcttcg 900  
 agcccggcct gcactgctgg attacgggct ggggcgcctt gcgcgagggc 950  
 ggccccatca gcaacgctct gcagaaagtg gatgtgcagt tgatcccaca 1000  
 ggacctgtgc agcgaggcct atcgctacca ggtgacgcca cgcattgctgt 1050  
 gtgccggcta ccgcaagggc aagaaggatg cctgtcaggg tgactcaggt 1100  
 ggtccgctgg tgtgcaaggc actcagtggc cgctgggtcc tggcggggct 1150  
 ggtcagctgg ggccctgggt gtggccggcc taactacttc ggcgtctaca 1200  
 cccgcatcac aggtgtgatc agctggatcc agcaagtggg gacctgagga 1250  
 actgcccccc tgcaaagcag ggcccacctc ctggactcag agagcccagg 1300  
 gcaactgccca agcagggggga caagtat 1327

<210> 171

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 171

taacagctgc ccaactgcttc cagg 24

<210> 172

<211> 22

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 172

taatccagca gtgcaggccg gg 22

<210> 173

<211> 50

<212> DNA



<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 173

atggcctcca cggtgctgtg gaccgtgttc ctgggcaagg tgtggcagaa 50

<210> 174

<211> 25

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 174

tgccctatgca ctgaggaggc agaag 25

<210> 175

<211> 25

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 175

aggcagggac acagagtcca ttcac 25

<210> 176

<211> 50

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 176

agtatgattt gccgtgcacc cagggccagt ggacgatcca gaacaggagg 50

<210> 177

<211> 1510

<212> DNA

<213> Homo sapiens

<400> 177

ggacgagggc agatctcgtt ctggggcaag ccgttgacac tcgctccctg 50

ccaccgcccg ggetccgtgc cgccaagttt tcattttcca ctttctctgc 100

ctccagtccc ccagcccctg gccgagagaa gggctcttacc ggccgggatt 150

gctggaaaca ccaagaggtg gtttttgttt tttaaaactt ctgtttcttg 200

ggaggggggtg tggcggggca ggatgagcaa ctccgttcct ctgctctggt 250

tctggagcct ctgctattgc tttgctgCGG ggagccccgt accttttggT 300  
 ccagagggac ggctggaaga taagctccac aaacccaaag ctacacagac 350  
 tgaggtcaaa ccatctgtga ggtttaacct ccgcacctcc aaggacccag 400  
 agcatgaagg atgctacctc tccgtcgGCC acagccagcc cttagaagac 450  
 tgcagtttca acatgacagc taaaaccttt ttcatcattc acggatggac 500  
 gatgagcggT atctttgaaa actggctgca caaactcgtg tcagccctgc 550  
 acacaagaga gaaagacgcc aatgtagttg tggttgactg gctcccctg 600  
 gccaccagc tttacacgga tgcggtcaat aataccaggg tgggtgggaca 650  
 cagcattgcc aggatgctcg actggctgca ggagaaggac gatttttctc 700  
 tcgggaatgt ccacttgatc ggctacagcc tcggagcgca cgtggccggg 750  
 tatgcaggca acttcgtgaa aggaacgggtg ggccgaatca caggtttggA 800  
 tcttgccggg cccatgtttg aaggggccga catccacaag aggctctctc 850  
 cggacgatgc agattttgtg gatgtcctcc acacctacac gcgttccttc 900  
 ggcttgagca ttggtattca gatgcctgtg ggccacattg acatctacc 950  
 caatgggggt gacttcacgc caggctgtgg actcaacgat gtcttgggat 1000  
 caattgcata tggaacaatc acagaggtgg taaaatgtga gcatgagcga 1050  
 gccgtccacc tctttgttga ctctctggtg aatcaggaca agccgagttt 1100  
 tgccttccag tgactgact ccaatcgctt caaaaagggg atctgtctga 1150  
 gctgccgcaa gaaccgttgt aatagcattg gctacaatgc caagaaaatg 1200  
 aggaacaaga ggaacagcaa aatgtacctA aaaaccggg caggcatgcc 1250  
 tttcagaggt aaccttcagt ccctggagtg tccctgagga aggcccttaa 1300  
 tacctccttc ttaataccat gctgcagagc agggcacatc ctagccag 1350  
 agaagtggcc agcacaatcc aatcaaatcg ttgcaaatca gattacactg 1400  
 tgcatgtcct aggaaagggA atctttacaa aataaacagt gtggaccct 1450  
 aataaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 1500  
 aaaaaaaaaa 1510

<210> 178

<211> 354

<212> PRT

<213> Homo sapiens

<400> 178

Met	Ser	Asn	Ser	Val	Pro	Leu	Leu	Cys	Phe	Trp	Ser	Leu	Cys	Tyr
1				5					10					15
Cys	Phe	Ala	Ala	Gly	Ser	Pro	Val	Pro	Phe	Gly	Pro	Glu	Gly	Arg
				20					25					30
Leu	Glu	Asp	Lys	Leu	His	Lys	Pro	Lys	Ala	Thr	Gln	Thr	Glu	Val
				35					40					45
Lys	Pro	Ser	Val	Arg	Phe	Asn	Leu	Arg	Thr	Ser	Lys	Asp	Pro	Glu
				50					55					60
His	Glu	Gly	Cys	Tyr	Leu	Ser	Val	Gly	His	Ser	Gln	Pro	Leu	Glu
				65					70					75
Asp	Cys	Ser	Phe	Asn	Met	Thr	Ala	Lys	Thr	Phe	Phe	Ile	Ile	His
				80					85					90
Gly	Trp	Thr	Met	Ser	Gly	Ile	Phe	Glu	Asn	Trp	Leu	His	Lys	Leu
				95					100					105
Val	Ser	Ala	Leu	His	Thr	Arg	Glu	Lys	Asp	Ala	Asn	Val	Val	Val
				110					115					120
Val	Asp	Trp	Leu	Pro	Leu	Ala	His	Gln	Leu	Tyr	Thr	Asp	Ala	Val
				125					130					135
Asn	Asn	Thr	Arg	Val	Val	Gly	His	Ser	Ile	Ala	Arg	Met	Leu	Asp
				140					145					150
Trp	Leu	Gln	Glu	Lys	Asp	Asp	Phe	Ser	Leu	Gly	Asn	Val	His	Leu
				155					160					165
Ile	Gly	Tyr	Ser	Leu	Gly	Ala	His	Val	Ala	Gly	Tyr	Ala	Gly	Asn
				170					175					180
Phe	Val	Lys	Gly	Thr	Val	Gly	Arg	Ile	Thr	Gly	Leu	Asp	Pro	Ala
				185					190					195
Gly	Pro	Met	Phe	Glu	Gly	Ala	Asp	Ile	His	Lys	Arg	Leu	Ser	Pro
				200					205					210
Asp	Asp	Ala	Asp	Phe	Val	Asp	Val	Leu	His	Thr	Tyr	Thr	Arg	Ser
				215					220					225
Phe	Gly	Leu	Ser	Ile	Gly	Ile	Gln	Met	Pro	Val	Gly	His	Ile	Asp
				230					235					240
Ile	Tyr	Pro	Asn	Gly	Gly	Asp	Phe	Gln	Pro	Gly	Cys	Gly	Leu	Asn
				245					250					255
Asp	Val	Leu	Gly	Ser	Ile	Ala	Tyr	Gly	Thr	Ile	Thr	Glu	Val	Val
				260					265					270
Lys	Cys	Glu	His	Glu	Arg	Ala	Val	His	Leu	Phe	Val	Asp	Ser	Leu
				275					280					285

Val Asn Gln Asp Lys Pro Ser Phe Ala Phe Gln Cys Thr Asp Ser  
290 295 300

Asn Arg Phe Lys Lys Gly Ile Cys Leu Ser Cys Arg Lys Asn Arg  
305 310 315

Cys Asn Ser Ile Gly Tyr Asn Ala Lys Lys Met Arg Asn Lys Arg  
320 325 330

Asn Ser Lys Met Tyr Leu Lys Thr Arg Ala Gly Met Pro Phe Arg  
335 340 345

Gly Asn Leu Gln Ser Leu Glu Cys Pro  
350

<210> 179

<211> 23

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 179

gtgagcatga gcgagccgtc cac 23

<210> 180

<211> 26

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 180

gctattacaa cggttcttgc ggcagc 26

<210> 181

<211> 44

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 181

ttgactctct ggtgaatcag gacaagccga gttttgcctt ccag 44

<210> 182

<211> 3240

<212> DNA

<213> Homo sapiens

<400> 182

cggacgcgtg ggcggacgcg tgggcctggg caagggccgg ggcgccgggc 50

cgagccacct cttcccctcc cccgcttccc tgtcgcgctc cgctggctgg 100  
acgcgctgga ggagtggagc agcaccggc cggccctggg ggctgacagt 150  
cggcaaagtt tggcccgaag aggaagtggc ctcaaaccgc ggaggtggc 200  
gaccaggcca gaccaggggc gctcgctgcc tgcggggcgg ctgtaggcga 250  
gggcgcgccc cagtgccgag acccggggct tcaggagccg gccccgggag 300  
agaagagtgc ggcggcggac ggagaaaaca actccaaagt tggcgaaagg 350  
caccgcccct actcccgggc tgccgcgcgc tccccgcccc cagccctggc 400  
atccagagta cgggtcgagc ccggggccatg gagccccct ggggaggcgg 450  
caccaggag cctgggcgcc cggggctccg ccgcgacccc atcgggtaga 500  
ccacagaagc tccgggaccc ttccggcacc tctggacagc ccaggatgct 550  
gttgccacc ctctctctcc tctctcttgg aggcgctctg gcccatccag 600  
accggaattat ttttccaaat catgcttgtg aggaccccc agcagtgtc 650  
ttagaagtgc agggcacctt acagaggccc ctggtccggg acagccgcac 700  
ctccccctgc aactgcacct ggctcatcct gggcagcaag gaacagactg 750  
tcaccatcag gttccagaag ctacacctgg cctgtggctc agagcgctta 800  
accctacgct cccctctcca gccactgac tccctgtgtg aggcacctcc 850  
cagccctctg cagctgcccg ggggcaacgt caccatcact tacagctatg 900  
ctggggccag agcaccatg ggccagggt tctgtctctc ctacagccaa 950  
gattggctga tgtgcctgca ggaagagttt cagtgcctga accaccgctg 1000  
tgtatctgct gtccagcgt gtgatgggt tgatgcctgt ggcgatggct 1050  
ctgatgaagc aggttgacgc tcagaccct tccctggcct gacccaaga 1100  
cccgccccct cctgccttg caatgtcacc ttggaggact tctatgggg 1150  
cttctctct cctggatata cacacctagc ctcagtctcc caccaccagt 1200  
cctgccattg gctgctggac ccccatgatg gccggcggct ggccgtgcgc 1250  
ttcacagccc tggacttggg ctttggagat gcagtgcctg tgtatgacgg 1300  
ccctgggccc cctgagagct cccgactact gcgtagtctc acccacttca 1350  
gcaatggcaa ggctgtcact gtggagacac tgtctggcca ggctgttg 1400  
tcctaccaca cagttgcttg gagcaatggc cgtggcttca atgccacct 1450  
ccatgtgcgg ggctattgct tgccttggga cagaccctgt ggcttaggct 1500

ctggcctggg agctggcgaa ggcctaggtg agcgctgcta cagtgaggca 1550  
cagcgctgtg acggctcatg ggactgtgct gacggcacag atgaggagga 1600  
ctgcccaggc tgcccacctg gacacttccc ctgtggggct gctggcacct 1650  
ctggtgccac agcctgctac ctgcctgctg accgctgcaa ctaccagact 1700  
ttctgtgctg atggagcaga tgagagacgc tgtcggcatt gccagcctgg 1750  
caatttccga tgccgggacg agaagtgcgt gtatgagacg tgggtgtgcg 1800  
atgggcagcc agactgtgcg gacggcagtg atgagtggga ctgctcctat 1850  
gttctgcccc gcaaggatcat tacagctgca gtcattggca gcctagtgtg 1900  
cggcctgctc ctgggtcatcg ccctgggctg cacctgcaag ctctatgcca 1950  
ttcgcaccca ggagtacagc atctttgccc cctctccccg gatggaggct 2000  
gagattgtgc agcagcaggc acccccttcc tacgggcagc tcattgcca 2050  
gggtgccatc ccacctgtag aagactttcc tacagagaat cctaatgata 2100  
actcagtgtc gggcaacctg cgttctctgc tacagatctt acgccaggat 2150  
atgactccag gaggtggccc aggtgcccgc cgtcgtcagc ggggccgctt 2200  
gatgcgacgc ctggtacgcc gtctccgccg ctggggcttg ctccctcgaa 2250  
ccaacacccc ggctcgggcc tctgaggcca gatcccaggc cacaccttct 2300  
gctgctcccc ttgaggccct agatggtggc acaggctccag cccgtgaggg 2350  
cggggcagtg ggtgggcaag atggggagca ggcaccccca ctgcccata 2400  
aggctcccct cccatctgct agcacgtctc cagccccac tactgtccct 2450  
gaagccccag ggccactgcc ctcaactgcc ctagagccat cactattgtc 2500  
tgagtggtg caggccctgc gaggccgctt gttgccagc ctggggcccc 2550  
caggaccaac cgggagcccc cctggacccc acacagcagt cctggccctg 2600  
gaagatgagg acgatgtgct actggtgcca ctggctgagc cgggggtgtg 2650  
ggtagctgag gcagaggatg agccactgct tacctgaggg gacctggggg 2700  
ctctactgag gcctctcccc tgggggctct actcatagtg gcacaacctt 2750  
ttagagggtg gtcagcctcc cctccaccac ttccttccct gtccctggat 2800  
ttcagggact tgggtgggct cccgttgacc ctatgtagct gctataaagt 2850  
taagtgtccc tcaggcaggg agagggtca cagagtctcc tctgtacgtg 2900

gccatggcca gacacccag tcccttcacc accacctgct ccccacgcca 2950  
 ccaccatttg ggtggctggt tttaaaaagt aaagttctta gaggatcata 3000  
 ggtctggaca ctccatcctt gccaaacctc tacccaaaag tggccttaag 3050  
 caccggaatg ccaattaact agagaccctc cagcccccaa ggggaggatt 3100  
 tgggcagaac ctgaggtttt gccatccaca atccctccta cagggcctgg 3150  
 ctcacaaaaa gagtgcacaa aatgcttcta ttccatagct acggcattgc 3200  
 tcagtaagtt gaggtcaaaa ataaaggaat catacatctc 3240

<210> 183

<211> 713

<212> PRT

<213> Homo sapiens

<400> 183

Met	Leu	Leu	Ala	Thr	Leu	Leu	Leu	Leu	Leu	Gly	Gly	Ala	Leu	1	5	10	15
Ala	His	Pro	Asp	Arg	Ile	Ile	Phe	Pro	Asn	His	Ala	Cys	Glu	Asp	20	25	30
Pro	Pro	Ala	Val	Leu	Leu	Glu	Val	Gln	Gly	Thr	Leu	Gln	Arg	Pro	35	40	45
Leu	Val	Arg	Asp	Ser	Arg	Thr	Ser	Pro	Ala	Asn	Cys	Thr	Trp	Leu	50	55	60
Ile	Leu	Gly	Ser	Lys	Glu	Gln	Thr	Val	Thr	Ile	Arg	Phe	Gln	Lys	65	70	75
Leu	His	Leu	Ala	Cys	Gly	Ser	Glu	Arg	Leu	Thr	Leu	Arg	Ser	Pro	80	85	90
Leu	Gln	Pro	Leu	Ile	Ser	Leu	Cys	Glu	Ala	Pro	Pro	Ser	Pro	Leu	95	100	105
Gln	Leu	Pro	Gly	Gly	Asn	Val	Thr	Ile	Thr	Tyr	Ser	Tyr	Ala	Gly	110	115	120
Ala	Arg	Ala	Pro	Met	Gly	Gln	Gly	Phe	Leu	Leu	Ser	Tyr	Ser	Gln	125	130	135
Asp	Trp	Leu	Met	Cys	Leu	Gln	Glu	Glu	Phe	Gln	Cys	Leu	Asn	His	140	145	150
Arg	Cys	Val	Ser	Ala	Val	Gln	Arg	Cys	Asp	Gly	Val	Asp	Ala	Cys	155	160	165
Gly	Asp	Gly	Ser	Asp	Glu	Ala	Gly	Cys	Ser	Ser	Asp	Pro	Phe	Pro	170	175	180
Gly	Leu	Thr	Pro	Arg	Pro	Val	Pro	Ser	Leu	Pro	Cys	Asn	Val	Thr			

185	190	195
Leu Glu Asp Phe Tyr Gly Val Phe Ser	Ser Pro Gly Tyr Thr His	
200	205	210
Leu Ala Ser Val Ser His Pro Gln Ser	Cys His Trp Leu Leu Asp	
215	220	225
Pro His Asp Gly Arg Arg Leu Ala Val	Arg Phe Thr Ala Leu Asp	
230	235	240
Leu Gly Phe Gly Asp Ala Val His Val	Tyr Asp Gly Pro Gly Pro	
245	250	255
Pro Glu Ser Ser Arg Leu Leu Arg Ser	Leu Thr His Phe Ser Asn	
260	265	270
Gly Lys Ala Val Thr Val Glu Thr Leu	Ser Gly Gln Ala Val Val	
275	280	285
Ser Tyr His Thr Val Ala Trp Ser Asn	Gly Arg Gly Phe Asn Ala	
290	295	300
Thr Tyr His Val Arg Gly Tyr Cys Leu	Pro Trp Asp Arg Pro Cys	
305	310	315
Gly Leu Gly Ser Gly Leu Gly Ala Gly	Glu Gly Leu Gly Glu Arg	
320	325	330
Cys Tyr Ser Glu Ala Gln Arg Cys Asp	Gly Ser Trp Asp Cys Ala	
335	340	345
Asp Gly Thr Asp Glu Glu Asp Cys Pro	Gly Cys Pro Pro Gly His	
350	355	360
Phe Pro Cys Gly Ala Ala Gly Thr Ser	Gly Ala Thr Ala Cys Tyr	
365	370	375
Leu Pro Ala Asp Arg Cys Asn Tyr Gln	Thr Phe Cys Ala Asp Gly	
380	385	390
Ala Asp Glu Arg Arg Cys Arg His Cys	Gln Pro Gly Asn Phe Arg	
395	400	405
Cys Arg Asp Glu Lys Cys Val Tyr Glu	Thr Trp Val Cys Asp Gly	
410	415	420
Gln Pro Asp Cys Ala Asp Gly Ser Asp	Glu Trp Asp Cys Ser Tyr	
425	430	435
Val Leu Pro Arg Lys Val Ile Thr Ala	Ala Val Ile Gly Ser Leu	
440	445	450
Val Cys Gly Leu Leu Leu Val Ile Ala	Leu Gly Cys Thr Cys Lys	
455	460	465
Leu Tyr Ala Ile Arg Thr Gln Glu Tyr	Ser Ile Phe Ala Pro Leu	



	470		475		480
Ser Arg Met Glu	Ala Glu Ile Val Gln	Gln Gln Ala Pro Pro	Ser		
	485		490		495
Tyr Gly Gln Leu	Ile Ala Gln Gly Ala	Ile Pro Pro Val Glu	Asp		
	500		505		510
Phe Pro Thr Glu	Asn Pro Asn Asp Asn	Ser Val Leu Gly Asn	Leu		
	515		520		525
Arg Ser Leu Leu	Gln Ile Leu Arg Gln	Asp Met Thr Pro Gly	Gly		
	530		535		540
Gly Pro Gly Ala	Arg Arg Arg Gln Arg	Gly Arg Leu Met Arg	Arg		
	545		550		555
Leu Val Arg Arg	Leu Arg Arg Trp Gly	Leu Leu Pro Arg Thr	Asn		
	560		565		570
Thr Pro Ala Arg	Ala Ser Glu Ala Arg	Ser Gln Val Thr Pro	Ser		
	575		580		585
Ala Ala Pro Leu	Glu Ala Leu Asp Gly	Gly Thr Gly Pro Ala	Arg		
	590		595		600
Glu Gly Gly Ala	Val Gly Gly Gln Asp	Gly Glu Gln Ala Pro	Pro		
	605		610		615
Leu Pro Ile Lys	Ala Pro Leu Pro Ser	Ala Ser Thr Ser Pro	Ala		
	620		625		630
Pro Thr Thr Val	Pro Glu Ala Pro Gly	Pro Leu Pro Ser Leu	Pro		
	635		640		645
Leu Glu Pro Ser	Leu Leu Ser Gly Val	Val Gln Ala Leu Arg	Gly		
	650		655		660
Arg Leu Leu Pro	Ser Leu Gly Pro Pro	Gly Pro Thr Arg Ser	Pro		
	665		670		675
Pro Gly Pro His	Thr Ala Val Leu Ala	Leu Glu Asp Glu Asp	Asp		
	680		685		690
Val Leu Leu Val	Pro Leu Ala Glu Pro	Gly Val Trp Val Ala	Glu		
	695		700		705
Ala Glu Asp Glu	Pro Leu Leu Thr				
	710				

<210> 184

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 184  
ggctgtcact gtggagacac 20

<210> 185  
<211> 18  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 185  
gcaaggtcat tacagctg 18

<210> 186  
<211> 23  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 186  
agaacatagg agcagtcacca ctc 23

<210> 187  
<211> 23  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 187  
tgcctgctgc tgcacaatct cag 23

<210> 188  
<211> 45  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 188  
ggctattgct tgccttgga cagaccctgt ggcttaggct ctggc 45

<210> 189  
<211> 663  
<212> DNA  
<213> Homo sapiens

<400> 189  
cgagctgggc gagaagtagg ggagggcggt gtcgccgc ggtggcggtt 50  
gctatcgctt cgcagaacct actcaggcag ccagctgaga agagttgagg 100

gaaagtgctg ctgctgggtc tgcagacgcg atggataacg tgcagccgaa 150  
 aataaaacat cgcccccttct gcttcagtgt gaaaggccac gtgaagatgc 200  
 tgcggctggc actaactgtg acatctatga ccttttttat catcgacaaa 250  
 gccctgaac catatattgt tatcactgga tttgaagtca ccgttatctt 300  
 atttttcata cttttatatg tactcagact tgatcgatta atgaagtgg 350  
 tattttggcc tttgcttgat attatcaact cactggtaac aacagtattc 400  
 atgctcatcg tatctgtgtt ggcaactgata ccagaaacca caacattgac 450  
 agttggtgga ggggtgtttg cacttgtagc agcagtatgc tgtcttgccg 500  
 acggggccct tatttaccgg aagcttctgt tcaatcccag cggtccttac 550  
 cagaaaaagc ctgtgcatga aaaaaaagaa gttttgtaat tttatattac 600  
 ttttagttt gatactaagt attaaacata tttctgtatt cttccaaaaa 650  
 aaaaaaaaaa aaa 663

<210> 190

<211> 152

<212> PRT

<213> Homo sapiens

<400> 190

Met	Asp	Asn	Val	Gln	Pro	Lys	Ile	Lys	His	Arg	Pro	Phe	Cys	Phe
1				5					10					15
Ser	Val	Lys	Gly	His	Val	Lys	Met	Leu	Arg	Leu	Ala	Leu	Thr	Val
				20					25					30
Thr	Ser	Met	Thr	Phe	Phe	Ile	Ile	Ala	Gln	Ala	Pro	Glu	Pro	Tyr
				35					40					45
Ile	Val	Ile	Thr	Gly	Phe	Glu	Val	Thr	Val	Ile	Leu	Phe	Phe	Ile
				50					55					60
Leu	Leu	Tyr	Val	Leu	Arg	Leu	Asp	Arg	Leu	Met	Lys	Trp	Leu	Phe
				65					70					75
Trp	Pro	Leu	Leu	Asp	Ile	Ile	Asn	Ser	Leu	Val	Thr	Thr	Val	Phe
				80					85					90
Met	Leu	Ile	Val	Ser	Val	Leu	Ala	Leu	Ile	Pro	Glu	Thr	Thr	Thr
				95					100					105
Leu	Thr	Val	Gly	Gly	Gly	Val	Phe	Ala	Leu	Val	Thr	Ala	Val	Cys
				110					115					120
Cys	Leu	Ala	Asp	Gly	Ala	Leu	Ile	Tyr	Arg	Lys	Leu	Leu	Phe	Asn
				125					130					135

Pro Ser Gly Pro Tyr Gln Lys Lys Pro Val His Glu Lys Lys Glu  
140 145 150

Val Leu

<210> 191

<211> 495

<212> DNA

<213> Homo sapiens

<220>

<221> unsure

<222> 78, 212, 234, 487

<223> unknown base

<400> 191

gggcgagaag taggggaggg cgtgttccgc cgcggtggcg gttgctatcg 50

ttttgcagaa cctactcagg cagccagntg agaagagttg agggaaagtg 100

ctgctgctgg gtctgcagac gcgatggata acgtgcagcc gaaaataaaa 150

catcgccctt tctgcttcag tgtgaaaggc cacgtgaaga tgctgcggct 200

ggcactaact gngacatcta tgaccttttt tatnatcgca caagcccctg 250

aaccatatat tgttatcact ggatttgaag tcaccgttat cttatttttc 300

atacttttat atgtactcag acttgatcga ttaatgaagt ggttattttg 350

gcctttgott gatattatca actcactggc aacaacagta ttcattgtca 400

tcgtatctgt gttggcactg ataccagaaa ccacaacatt gacagttggt 450

ggaggggtgt ttgcacttgt gacagcagta tgctgtnttg ccgac 495

<210> 192

<211> 25

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 192

cgttttgcag aacctactca ggcag 25

<210> 193

<211> 25

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 193

cctccaccaa ctgtcaatgt tgtgg 25

<210> 194

<211> 40

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 194

aaagtgtgc tgctgggtct gcagacgcga tggataacgt 40

<210> 195

<211> 1879

<212> DNA

<213> Homo sapien

<400> 195

cagccccgcg cgccggccga gtcgctgagc cgcggtgcc ggacgggacg 50  
ggacgggcta ggctggggcg gcccccgagg ccccgccgtg ggcattgggcg 100  
cactggcccg ggcgtgctg ctgcctctgc tggcccagtg gtcctgcgc 150  
gccgcccccg agctggcccc cgcgcccttc acgtgcccc tccgggtggc 200  
cgcgggccacg aaccgcgtag ttgcgcccac cccgggaccc gggaccctg 250  
ccgagcgcca cgccgacggc ttggcgctcg ccctggagcc tgccctggcg 300  
tcccccgcg ggcgcgcaa cttcttgagg atggtagaca acctgcaggg 350  
ggactctggc cgcggtact acctggagat gctgatcggg accccccgc 400  
agaagctaca gattctcggt gacactggaa gcagtaactt tgccgtggca 450  
ggaacccgc actcctacat agacacgtac ttgacacag agaggtctag 500  
cacataccgc tccaagggtt ttgacgtcac agtgaagtac acacaaggaa 550  
gctggacggg ctctgttggg gaagacctcg tcaccatccc caaaggcttc 600  
aatacttctt ttcttgtcaa cattgccact atttttgaat cagagaattt 650  
ctttttgcct gggattaaat ggaatggaat acttggccta gcttatgcca 700  
cacttgccaa gccatcaagt tctctggaga cttcttcga ctccctggtg 750  
acacaagcaa acatcccaaa cgttttctcc atgcagatgt gtggagccgg 800  
cttggccgtt gctggatctg ggaccaacgg aggtagtctt gtcttgggtg 850  
gaattgaacc aagtttgtat aaaggagaca tctggtatac ccctattaag 900  
gaagagtggg actaccagat agaaattctg aaattggaaa ttggaggcca 950

aagccttaat ctggactgca gagagtataa cgcagacaag gccatcgtgg 1000  
acagtggcac cacgtgctg cgcccgcccc agaaggtggt tgatgcggtg 1050  
gtggaagctg tggcccgcg atctctgatt ccagaattct ctgatgggtt 1100  
ctggactggg tcccagctgg cgtgctggac gaattcggaa acaccttggg 1150  
cttacttccc taaaatctcc atctacctga gagacgagaa ctccagcagg 1200  
tcattccgta tcacaatcct gcctcagctt tacattcagc ccatgatggg 1250  
ggccggcctg aattatgaat gttaccgatt cggcatttcc ccatccacaa 1300  
atgcgctggg gatcggtgcc acggtgatgg agggcttcta cgtcatcttc 1350  
gacagagccc agaagagggg gggcttcgca gcgagcccct gtgcagaaat 1400  
tgcaggtgct gcagtgtctg aaatttcgga gcctttctca acagaggatg 1450  
tagccagcaa ctgtgtcccc gctcagtctt tgagcgagcc cattttgtgg 1500  
attgtgtcct atgcgctcat gagcgtctgt ggagccatcc tccttgtctt 1550  
aatcgtcctg ctgctgctgc cgttcgggtg tcagcgtcgc ccccgtagcc 1600  
ctgaggtcgt caatgatgag tcctctctgg tcagacatcg ctggaaatga 1650  
atagccaggc ctgacctcaa gcaaccatga actcagctat taagaaaatc 1700  
acatttccag ggcagcagcc gggatcgatg gtggcgcttt ctctgtgcc 1750  
caccgctctt caatctctgt tctgtccca gatgccttct agattcactg 1800  
tcttttgatt cttgatttcc aagctttcaa atcctcccta cttccaagaa 1850  
aaataattaa aaaaaaaact tcattctaa 1879

<210> 196

<211> 518

<212> PRT.

<213> Homo sapien

<400> 196

Met	Gly	Ala	Leu	Ala	Arg	Ala	Leu	Leu	Pro	Leu	Leu	Ala	Gln
1				5				10					15
Trp	Leu	Leu	Arg	Ala	Ala	Pro	Glu	Leu	Ala	Pro	Ala	Pro	Phe
				20				25					30
Leu	Pro	Leu	Arg	Val	Ala	Ala	Ala	Thr	Asn	Arg	Val	Val	Ala
				35				40					45
Thr	Pro	Gly	Pro	Gly	Thr	Pro	Ala	Glu	Arg	His	Ala	Asp	Gly
				50				55					60

Ala	Leu	Ala	Leu	Glu	Pro	Ala	Leu	Ala	Ser	Pro	Ala	Gly	Ala	Ala		65	70	75
Asn	Phe	Leu	Ala	Met	Val	Asp	Asn	Leu	Gln	Gly	Asp	Ser	Gly	Arg		80	85	90
Gly	Tyr	Tyr	Leu	Glu	Met	Leu	Ile	Gly	Thr	Pro	Pro	Gln	Lys	Leu		95	100	105
Gln	Ile	Leu	Val	Asp	Thr	Gly	Ser	Ser	Asn	Phe	Ala	Val	Ala	Gly		110	115	120
Thr	Pro	His	Ser	Tyr	Ile	Asp	Thr	Tyr	Phe	Asp	Thr	Glu	Arg	Ser		125	130	135
Ser	Thr	Tyr	Arg	Ser	Lys	Gly	Phe	Asp	Val	Thr	Val	Lys	Tyr	Thr		140	145	150
Gln	Gly	Ser	Trp	Thr	Gly	Phe	Val	Gly	Glu	Asp	Leu	Val	Thr	Ile		155	160	165
Pro	Lys	Gly	Phe	Asn	Thr	Ser	Phe	Leu	Val	Asn	Ile	Ala	Thr	Ile		170	175	180
Phe	Glu	Ser	Glu	Asn	Phe	Phe	Leu	Pro	Gly	Ile	Lys	Trp	Asn	Gly		185	190	195
Ile	Leu	Gly	Leu	Ala	Tyr	Ala	Thr	Leu	Ala	Lys	Pro	Ser	Ser	Ser		200	205	210
Leu	Glu	Thr	Phe	Phe	Asp	Ser	Leu	Val	Thr	Gln	Ala	Asn	Ile	Pro		215	220	225
Asn	Val	Phe	Ser	Met	Gln	Met	Cys	Gly	Ala	Gly	Leu	Pro	Val	Ala		230	235	240
Gly	Ser	Gly	Thr	Asn	Gly	Gly	Ser	Leu	Val	Leu	Gly	Gly	Ile	Glu		245	250	255
Pro	Ser	Leu	Tyr	Lys	Gly	Asp	Ile	Trp	Tyr	Thr	Pro	Ile	Lys	Glu		260	265	270
Glu	Trp	Tyr	Tyr	Gln	Ile	Glu	Ile	Leu	Lys	Leu	Glu	Ile	Gly	Gly		275	280	285
Gln	Ser	Leu	Asn	Leu	Asp	Cys	Arg	Glu	Tyr	Asn	Ala	Asp	Lys	Ala		290	295	300
Ile	Val	Asp	Ser	Gly	Thr	Thr	Leu	Leu	Arg	Leu	Pro	Gln	Lys	Val		305	310	315
Phe	Asp	Ala	Val	Val	Glu	Ala	Val	Ala	Arg	Ala	Ser	Leu	Ile	Pro		320	325	330
Glu	Phe	Ser	Asp	Gly	Phe	Trp	Thr	Gly	Ser	Gln	Leu	Ala	Cys	Trp		335	340	345

Thr	Asn	Ser	Glu	Thr	Pro	Trp	Ser	Tyr	Phe	Pro	Lys	Ile	Ser	Ile	350	355	360
Tyr	Leu	Arg	Asp	Glu	Asn	Ser	Ser	Arg	Ser	Phe	Arg	Ile	Thr	Ile	365	370	375
Leu	Pro	Gln	Leu	Tyr	Ile	Gln	Pro	Met	Met	Gly	Ala	Gly	Leu	Asn	380	385	390
Tyr	Glu	Cys	Tyr	Arg	Phe	Gly	Ile	Ser	Pro	Ser	Thr	Asn	Ala	Leu	395	400	405
Val	Ile	Gly	Ala	Thr	Val	Met	Glu	Gly	Phe	Tyr	Val	Ile	Phe	Asp	410	415	420
Arg	Ala	Gln	Lys	Arg	Val	Gly	Phe	Ala	Ala	Ser	Pro	Cys	Ala	Glu	425	430	435
Ile	Ala	Gly	Ala	Ala	Val	Ser	Glu	Ile	Ser	Gly	Pro	Phe	Ser	Thr	440	445	450
Glu	Asp	Val	Ala	Ser	Asn	Cys	Val	Pro	Ala	Gln	Ser	Leu	Ser	Glu	455	460	465
Pro	Ile	Leu	Trp	Ile	Val	Ser	Tyr	Ala	Leu	Met	Ser	Val	Cys	Gly	470	475	480
Ala	Ile	Leu	Leu	Val	Leu	Ile	Val	Leu	Leu	Leu	Leu	Pro	Phe	Arg	485	490	495
Cys	Gln	Arg	Arg	Pro	Arg	Asp	Pro	Glu	Val	Val	Asn	Asp	Glu	Ser	500	505	510
Ser	Leu	Val	Arg	His	Arg	Trp	Lys								515		

<210> 197

<211> 21

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 197

cgagaagct acagattctc g 21

<210> 198

<211> 19

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 198

ggaaattgga ggccaaagc 19



<210> 199  
<211> 20  
<212> DNA  
<213> Artificial Sequence  
  
<220>  
<223> Synthetic oligonucleotide probe  
  
<400> 199  
ggatgtagcc agcaactgtg 20  
  
<210> 200  
<211> 19  
<212> DNA  
<213> Artificial Sequence  
  
<220>  
<223> Synthetic oligonucleotide probe  
  
<400> 200  
gccttggtc gttctcttc 19  
  
<210> 201  
<211> 18  
<212> DNA  
<213> Artificial Sequence  
  
<220>  
<223> Synthetic oligonucleotide probe  
  
<400> 201  
ggtcctgtgc ctggatgg 18  
  
<210> 202  
<211> 22  
<212> DNA  
<213> Artificial Sequence  
  
<220>  
<223> Synthetic oligonucleotide probe  
  
<400> 202  
gacaagacta cctccgttgg tc 22  
  
<210> 203  
<211> 24  
<212> DNA  
<213> Artificial Sequence  
  
<220>  
<223> Synthetic oligonucleotide probe  
  
<400> 203  
tgatgcacag ttcagcacct gttg 24  
  
<210> 204

<211> 47  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 204  
cgctccaagg gctttgacgt cacagtgaag tacacacaag gaagctg 47

<210> 205  
<211> 1939  
<212> DNA  
<213> Homo sapiens

<400> 205  
cgctccgcc ttcggaggct gacgcgcccg ggccgcgttc caggcctgtg 50  
cagggcggtat cggcagccgc ctggcggcga tccagggcgg tgcggggcct 100  
gggcgggagc cgggaggcgc ggccggcatg gaggcgctgc tgctgggcgc 150  
ggggttgctg ctgggcgctt acgtgcttgt ctactacaac ctggtgaagg 200  
ccccgccgtg cggcggcatg ggcaacctgc ggggcgcac ggccgtggtc 250  
acgggcgcca acagcggcat cggaaagatg acggcgctgg agctggcgcg 300  
ccggggagcg cgcgtggtgc tggcctgccg cagccaggag cgcggggagg 350  
cggtgcctt cgacctccgc caggagagtg ggaacaatga ggtcatcttc 400  
atggccttgg acttgccag tctggcctcg gtgcgggcct ttgccactgc 450  
ctttctgagc tctgagccac ggttgacat cctcatccac aatgccggtg 500  
tcagttcctg tggccggacc cgtgaggcgt ttaacctgct gcttcgggtg 550  
aaccatatcg gtccctttct gctgacacat ctgctgctgc cttgcctgaa 600  
ggcatgtgcc cctagccgcg tgggtggtgt agcctcagct gccactgtc 650  
ggggacgtct tgacttcaaa cgctggacc gccagtggt gggctggcgg 700  
caggagctgc gggcatatgc tgacactaag ctggctaatt tactgtttgc 750  
ccgggagctc gcccaaccagc ttgaggccac tggcgtcacc tgctatgcag 800  
cccacccagg gcctgtgaac tcggagctgt tctgcgcca tgttcctgga 850  
tggtgcgcc cacttttgcg ccattggct tggctggtgc tccgggcacc 900  
aagagggggt gccagacac ccctgtattg tgcctacaa gagggcatcg 950  
agccccctcag tgggagatat tttgccaact gccatgtgga agaggtcct 1000  
ccagctgccc gagacgaccg ggcagcccat cggctatggg aggccagcaa 1050

gaggctggca gggcttgggc ctggggagga tgctgaaccc gatgaagacc 1100  
 cccagtctga ggactcagag gcccacatctt ctctaagcac ccccaccct 1150  
 gaggagccca cagtttctca accttaccac agccctcaga gctcaccaga 1200  
 tttgtctaag atgacgcacc gaattcaggc taaagttgag cctgagatcc 1250  
 agctctccta accctcaggc caggatgctt gccatggcac ttcattgtcc 1300  
 ttgaaaacct cggatgtgtg tgaggccatg ccctggacac tgacgggttt 1350  
 gtgatcttga cctccgtggt tactttctgg ggccccaagc tgtgccctgg 1400  
 acatctcttt tcctggttga aggaataatg ggtgattatt tcttcctgag 1450  
 agtgacagta accccagatg gagagatagg ggtatgctag acaactgtgct 1500  
 tctcggaat ttggatgtag tattttcagg cccaccctt attgattctg 1550  
 atcagctctg gagcagaggc agggagtttg caatgtgatg cactgccaac 1600  
 attgagaatt agtgaactga tccctttgca accgtctagc taggtagtta 1650  
 aattaccccc atgttaatga agcgggaatta ggctcccgag ctaagggact 1700  
 cgcctagggc ctacacagtga gtaggaggag ggcctgggat ctgaacccaa 1750  
 gggctctgagg ccagggccga ctgcogtaag atgggtgctg agaagtgagt 1800  
 cagggcaggg cagctggtat cgaggtgccc catgggagta aggggacgcc 1850  
 ttccgggcgg atgcagggtt ggggtcatct gtatctgaag cccctcgga 1900  
 taaagcgcgt tgaccgccaa aaaaaaaaaa aaaaaaaaaa 1939

<210> 206

<211> 377

<212> PRT

<213> Homo sapiens

<400> 206

Met	Glu	Ala	Leu	Leu	Leu	Gly	Ala	Gly	Leu	Leu	Leu	Gly	Ala	Tyr
1				5					10					15
Val	Leu	Val	Tyr	Tyr	Asn	Leu	Val	Lys	Ala	Pro	Pro	Cys	Gly	Gly
				20					25					30
Met	Gly	Asn	Leu	Arg	Gly	Arg	Thr	Ala	Val	Val	Thr	Gly	Ala	Asn
				35					40					45
Ser	Gly	Ile	Gly	Lys	Met	Thr	Ala	Leu	Glu	Leu	Ala	Arg	Arg	Gly
				50					55					60
Ala	Arg	Val	Val	Leu	Ala	Cys	Arg	Ser	Gln	Glu	Arg	Gly	Glu	Ala
				65					70					75

Ala	Ala	Phe	Asp	Leu	Arg	Gln	Glu	Ser	Gly	Asn	Asn	Glu	Val	Ile	80	85	90
Phe	Met	Ala	Leu	Asp	Leu	Ala	Ser	Leu	Ala	Ser	Val	Arg	Ala	Phe	95	100	105
Ala	Thr	Ala	Phe	Leu	Ser	Ser	Glu	Pro	Arg	Leu	Asp	Ile	Leu	Ile	110	115	120
His	Asn	Ala	Gly	Ile	Ser	Ser	Cys	Gly	Arg	Thr	Arg	Glu	Ala	Phe	125	130	135
Asn	Leu	Leu	Leu	Arg	Val	Asn	His	Ile	Gly	Pro	Phe	Leu	Leu	Thr	140	145	150
His	Leu	Leu	Leu	Pro	Cys	Leu	Lys	Ala	Cys	Ala	Pro	Ser	Arg	Val	155	160	165
Val	Val	Val	Ala	Ser	Ala	Ala	His	Cys	Arg	Gly	Arg	Leu	Asp	Phe	170	175	180
Lys	Arg	Leu	Asp	Arg	Pro	Val	Val	Gly	Trp	Arg	Gln	Glu	Leu	Arg	185	190	195
Ala	Tyr	Ala	Asp	Thr	Lys	Leu	Ala	Asn	Val	Leu	Phe	Ala	Arg	Glu	200	205	210
Leu	Ala	Asn	Gln	Leu	Glu	Ala	Thr	Gly	Val	Thr	Cys	Tyr	Ala	Ala	215	220	225
His	Pro	Gly	Pro	Val	Asn	Ser	Glu	Leu	Phe	Leu	Arg	His	Val	Pro	230	235	240
Gly	Trp	Leu	Arg	Pro	Leu	Leu	Arg	Pro	Leu	Ala	Trp	Leu	Val	Leu	245	250	255
Arg	Ala	Pro	Arg	Gly	Gly	Ala	Gln	Thr	Pro	Leu	Tyr	Cys	Ala	Leu	260	265	270
Gln	Glu	Gly	Ile	Glu	Pro	Leu	Ser	Gly	Arg	Tyr	Phe	Ala	Asn	Cys	275	280	285
His	Val	Glu	Glu	Val	Pro	Pro	Ala	Ala	Arg	Asp	Asp	Arg	Ala	Ala	290	295	300
His	Arg	Leu	Trp	Glu	Ala	Ser	Lys	Arg	Leu	Ala	Gly	Leu	Gly	Pro	305	310	315
Gly	Glu	Asp	Ala	Glu	Pro	Asp	Glu	Asp	Pro	Gln	Ser	Glu	Asp	Ser	320	325	330
Glu	Ala	Pro	Ser	Ser	Leu	Ser	Thr	Pro	His	Pro	Glu	Glu	Pro	Thr	335	340	345
Val	Ser	Gln	Pro	Tyr	Pro	Ser	Pro	Gln	Ser	Ser	Pro	Asp	Leu	Ser	350	355	360

Lys Met Thr His Arg Ile Gln Ala Lys Val Glu Pro Glu Ile Gln  
365 370 375

Leu Ser

<210> 207

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 207

cttcatggcc ttggacttgg ccag 24

<210> 208

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 208

acgccagtgg cctcaagctg gttg 24

<210> 209

<211> 45

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 209

ctttctgagc tctgagccac ggttggacat cctcatccac aatgc 45

<210> 210

<211> 3716

<212> DNA

<213> Homo sapiens

<400> 210

ggaggagaca gcctcctggg gggcaggggt tccctgcctc tgctgctcct 50

gctcatcatg ggaggcatgg ctgaggactc cccgccccag atcctagtcc 100

acccccagga ccagctgttc cagggccctg gccctgccag gatgagctgc 150

caagcctcag gccagccacc tcccaccatc cgctgggttg tgaatgggca 200

gccctgagc atggtgcccc cagaccacaca ccacctctg cctgatggga 250

cccttctgct gctacagccc cctgcccggg gacatgccca cgatggccag 300

gccctgtcca cagacctggg tgtctacaca tgtgaggcca gcaaccggct 350  
tggcacggca gtcagcagag gcgctcggct gtctgtggct gtcctccggg 400  
aggatttcca gatccagcct cgggacatgg tggctgtggt ggggtgagcag 450  
tttactctgg aatgtgggcc gccctggggc caccagagc ccacagtctc 500  
atggtggaag gatgggaaac ccctggccct ccagcccga aggcacacag 550  
tgtccggggg gtccctgctg atggcaagag cagagaagag tgacgaaggg 600  
acctacatgt gtgtggccac caacagcgca ggacataggg agagccgcgc 650  
agcccgggtt tccatccagg agcccagga ctacacggag cctgtggagc 700  
ttctggctgt gcgaattcag ctggaaaatg tgacactgct gaaccgggat 750  
cctgcagagg gcccgaagcc tagaccggcg gtgtggctca gctggaagg 800  
cagtggccct gctgcgcctg cccaatctta cacggccttg ttcaggacct 850  
agactgcccc gggaggccag ggagctccgt gggcagagga gctgctggcc 900  
ggctggcaga gcgcagagct tggaggcctc cactggggcc aagactacga 950  
gttcaaagtg agaccatcct ctggccgggc tcgaggccct gacagcaacg 1000  
tgctgctcct gaggtgccc gaaaaagtgc ccagtgcccc acctcaggaa 1050  
gtgactctaa agcctggcaa tggcactgtc tttgtgagct ggggtcccacc 1100  
acctgctgaa aaccacaatg gcatcatccg tggctaccag gtctggagcc 1150  
tgggcaacac atcactgcca ccagccaact ggactgtagt tgggtgagcag 1200  
accagctgg aaatcgccac ccatatgcca ggctcctact gcgtgcaagt 1250  
ggctgcagtc actggtgctg gagctgggga gccagtaga cctgtctgcc 1300  
tcctttttaga gcaggccatg gagcgagcca cccaagaacc cagtgagcat 1350  
ggccctgga ccctggagca gctgagggtt accttgaagc ggcctgaggt 1400  
cattgccacc tgcggtgttg cactctggct gctgcttctg ggcaccgccg 1450  
tgtgtatcca ccgccggcgc cgagctaggg tgcacctggg ccaggtctg 1500  
tacagatata ccagtgagga tgccatccta aaacacagga tggatcacag 1550  
tgactcccag tggttggcag aacttggcg ttccacctct ggctctcggg 1600  
acctgagcag cagcagcagc ctacagctc ggctgggggc ggatgcccgg 1650  
gaccactag actgtcgtcg ctcttctc tcctgggact cccgaagccc 1700

cggeggtgccc ctgcttccag acaccagcac tttttatggc tccctcatcg 1750  
ctgagctgcc ctccagtacc ccagccaggc caagtcccca ggtcccagct 1800  
gtcaggcgcc tcccaccca gctggcccag ctctccagcc cctgttccag 1850  
ctcagacagc ctctgcagcc gcaggggact ctcttctccc cgcttgtctc 1900  
tgggccctgc agaggcttg aaggccaaaa agaagcagga gctgcagcat 1950  
gccaacagtt cccactgct ccggggcagc cactccttg agctccgggc 2000  
ctgtgagtta ggaaatagag gttccaagaa cctttccaa agcccaggag 2050  
ctgtgcccc agctctggtt gcctggcggg ccctgggacc gaaactctc 2100  
agctcctcaa atgagctggt tactcgatcat ctccctccag caccctctt 2150  
tctcatgaa actccccaa ctcagagtca acagaccag cctccggtgg 2200  
caccacaggc tccctctcc atcctgctgc cagcagcccc catccccatc 2250  
cttagccct gcagtcccc tagccccag gcctcttccc tctctggccc 2300  
cagcccagct tccagtccc tgtccagctc ctactgtca tccctggggg 2350  
aggatcaaga cagcgtgctg acccctgagg aggtagccct gtgcttgaa 2400  
ctcagtgagg gtgaggagac tcccaggaac agcgtctctc ccatgccaa 2450  
ggctccttca cccccacca cctatgggta catcagcgtc ccaacagcct 2500  
cagagttcac ggacatggc aggaactggag gaggggtggg gcccaagggg 2550  
ggagtcttgc tgtgcccacc tggccctgc ctacccccca ccccagcga 2600  
gggctcctta gccaatggtt ggggctcagc ctctgaggac aatgccgcca 2650  
gcgccagagc cagccttgtc agctcctccg atggctcctt cctcgctgat 2700  
gtcactttg cccgggccct ggcagtggct gtggatagct ttggtttcgg 2750  
tctagagccc agggaggcag actgcgtctt catagatgcc tcatcacctc 2800  
cctccccagc gcatgagatc ttctgacct ccaacctctc cctgccctg 2850  
tgaggagtga gccagactg gttggaagac atggaggtca gccacacca 2900  
gcggctggga agggggatgc ctccctggcc ccctgactct cagatctctt 2950  
cccagagaag tcagctccac tgtcgtatgc ccaaggctgg tgettctcct 3000  
gtagattact cctgaaccgt gtccttgaga ctcccagac gggaatcaga 3050  
accacttctc ctgtccaccc acaagacctg ggctgtggtg tgtgggtctt 3100  
ggcctgtgtt tctctgcagc tggggtccac ctccaaga ctccagagag 3150

ttctccctcc acgattgtga aaacaaatga aaacaaaatt agagcaaagc 3200  
 tgacctggag ccctcagga gcaaacatc atctccacct gactcctagc 3250  
 cactgctttc tctctgtgc catccactcc caccaccagg ttgttttggc 3300  
 ctgaggagca gccctgcctg ctgctcttcc cccaccattt ggatcacagg 3350  
 aagtggagga gccagagggtg cctttgtgga ggacagcagt ggctgctggg 3400  
 agagggctgt ggaggaagga gcttctcgga gccccctctc agccttacct 3450  
 gggccctcc tctagagaag agtcaactc tctccaacc tcaccatgga 3500  
 aagaaaataa ttatgaatgc cactgaggca ctgaggccct acctcatgcc 3550  
 aaacaaaggg ttcaaggctg ggtctagcga ggatgctgaa ggaagggagg 3600  
 tatgagaccg taggtcaaaa gcaccatcct cgtactgttg tcactatgag 3650  
 cttaagaaat ttgataccat aaaatggtaa aaaaaaaaaa aaaaaaaaaa 3700  
 aaaaaaaaaa aaaaaa 3716

<210> 211

<211> 985

<212> PRT

<213> Homo sapiens

<400> 211

Met	Gly	Gly	Met	Ala	Gln	Asp	Ser	Pro	Pro	Gln	Ile	Leu	Val	His
1				5					10					15
Pro	Gln	Asp	Gln	Leu	Phe	Gln	Gly	Pro	Gly	Pro	Ala	Arg	Met	Ser
			20						25					30
Cys	Gln	Ala	Ser	Gly	Gln	Pro	Pro	Pro	Thr	Ile	Arg	Trp	Leu	Leu
			35						40					45
Asn	Gly	Gln	Pro	Leu	Ser	Met	Val	Pro	Pro	Asp	Pro	His	His	Leu
			50						55					60
Leu	Pro	Asp	Gly	Thr	Leu	Leu	Leu	Leu	Gln	Pro	Pro	Ala	Arg	Gly
			65						70					75
His	Ala	His	Asp	Gly	Gln	Ala	Leu	Ser	Thr	Asp	Leu	Gly	Val	Tyr
			80						85					90
Thr	Cys	Glu	Ala	Ser	Asn	Arg	Leu	Gly	Thr	Ala	Val	Ser	Arg	Gly
			95						100					105
Ala	Arg	Leu	Ser	Val	Ala	Val	Leu	Arg	Glu	Asp	Phe	Gln	Ile	Gln
			110						115					120
Pro	Arg	Asp	Met	Val	Ala	Val	Val	Gly	Glu	Gln	Phe	Thr	Leu	Glu
			125						130					135



Cys Gly Pro Pro	Trp Gly His Pro Glu Pro Thr Val Ser Trp Trp	140	145	150
Lys Asp Gly Lys	Pro Leu Ala Leu Gln Pro Gly Arg His Thr Val	155	160	165
Ser Gly Gly Ser	Leu Leu Met Ala Arg Ala Glu Lys Ser Asp Glu	170	175	180
Gly Thr Tyr Met	Cys Val Ala Thr Asn Ser Ala Gly His Arg Glu	185	190	195
Ser Arg Ala Ala	Arg Val Ser Ile Gln Glu Pro Gln Asp Tyr Thr	200	205	210
Glu Pro Val Glu	Leu Leu Ala Val Arg Ile Gln Leu Glu Asn Val	215	220	225
Thr Leu Leu Asn	Pro Asp Pro Ala Glu Gly Pro Lys Pro Arg Pro	230	235	240
Ala Val Trp Leu	Ser Trp Lys Val Ser Gly Pro Ala Ala Pro Ala	245	250	255
Gln Ser Tyr Thr	Ala Leu Phe Arg Thr Gln Thr Ala Pro Gly Gly	260	265	270
Gln Gly Ala Pro	Trp Ala Glu Glu Leu Leu Ala Gly Trp Gln Ser	275	280	285
Ala Glu Leu Gly	Gly Leu His Trp Gly Gln Asp Tyr Glu Phe Lys	290	295	300
Val Arg Pro Ser	Ser Gly Arg Ala Arg Gly Pro Asp Ser Asn Val	305	310	315
Leu Leu Leu Arg	Leu Pro Glu Lys Val Pro Ser Ala Pro Pro Gln	320	325	330
Glu Val Thr Leu	Lys Pro Gly Asn Gly Thr Val Phe Val Ser Trp	335	340	345
Val Pro Pro Pro	Ala Glu Asn His Asn Gly Ile Ile Arg Gly Tyr	350	355	360
Gln Val Trp Ser	Leu Gly Asn Thr Ser Leu Pro Pro Ala Asn Trp	365	370	375
Thr Val Val Gly	Glu Gln Thr Gln Leu Glu Ile Ala Thr His Met	380	385	390
Pro Gly Ser Tyr	Cys Val Gln Val Ala Ala Val Thr Gly Ala Gly	395	400	405
Ala Gly Glu Pro	Ser Arg Pro Val Cys Leu Leu Leu Glu Gln Ala	410	415	420

Met Glu Arg Ala Thr Gln Glu Pro Ser	Glu His Gly Pro Trp Thr	425	430	435
Leu Glu Gln Leu Arg Ala Thr Leu Lys	Arg Pro Glu Val Ile Ala	440	445	450
Thr Cys Gly Val Ala Leu Trp Leu Leu	Leu Leu Gly Thr Ala Val	455	460	465
Cys Ile His Arg Arg Arg Arg Ala Arg	Val His Leu Gly Pro Gly	470	475	480
Leu Tyr Arg Tyr Thr Ser Glu Asp Ala	Ile Leu Lys His Arg Met	485	490	495
Asp His Ser Asp Ser Gln Trp Leu Ala	Asp Thr Trp Arg Ser Thr	500	505	510
Ser Gly Ser Arg Asp Leu Ser Ser Ser	Ser Ser Leu Ser Ser Arg	515	520	525
Leu Gly Ala Asp Ala Arg Asp Pro Leu	Asp Cys Arg Arg Ser Leu	530	535	540
Leu Ser Trp Asp Ser Arg Ser Pro Gly	Val Pro Leu Leu Pro Asp	545	550	555
Thr Ser Thr Phe Tyr Gly Ser Leu Ile	Ala Glu Leu Pro Ser Ser	560	565	570
Thr Pro Ala Arg Pro Ser Pro Gln Val	Pro Ala Val Arg Arg Leu	575	580	585
Pro Pro Gln Leu Ala Gln Leu Ser Ser	Pro Cys Ser Ser Ser Asp	590	595	600
Ser Leu Cys Ser Arg Arg Gly Leu Ser	Ser Pro Arg Leu Ser Leu	605	610	615
Ala Pro Ala Glu Ala Trp Lys Ala Lys	Lys Lys Gln Glu Leu Gln	620	625	630
His Ala Asn Ser Ser Pro Leu Leu Arg	Gly Ser His Ser Leu Glu	635	640	645
Leu Arg Ala Cys Glu Leu Gly Asn Arg	Gly Ser Lys Asn Leu Ser	650	655	660
Gln Ser Pro Gly Ala Val Pro Gln Ala	Leu Val Ala Trp Arg Ala	665	670	675
Leu Gly Pro Lys Leu Leu Ser Ser Ser	Asn Glu Leu Val Thr Arg	680	685	690
His Leu Pro Pro Ala Pro Leu Phe Pro	His Glu Thr Pro Pro Thr	695	700	705

Gln Ser Gln Gln Thr Gln Pro Pro Val Ala Pro Gln Ala Pro Ser	710	715	720
Ser Ile Leu Leu Pro Ala Ala Pro Ile Pro Ile Leu Ser Pro Cys	725	730	735
Ser Pro Pro Ser Pro Gln Ala Ser Ser Leu Ser Gly Pro Ser Pro	740	745	750
Ala Ser Ser Arg Leu Ser Ser Ser Ser Leu Ser Ser Leu Gly Glu	755	760	765
Asp Gln Asp Ser Val Leu Thr Pro Glu Glu Val Ala Leu Cys Leu	770	775	780
Glu Leu Ser Glu Gly Glu Glu Thr Pro Arg Asn Ser Val Ser Pro	785	790	795
Met Pro Arg Ala Pro Ser Pro Pro Thr Thr Tyr Gly Tyr Ile Ser	800	805	810
Val Pro Thr Ala Ser Glu Phe Thr Asp Met Gly Arg Thr Gly Gly	815	820	825
Gly Val Gly Pro Lys Gly Gly Val Leu Leu Cys Pro Pro Arg Pro	830	835	840
Cys Leu Thr Pro Thr Pro Ser Glu Gly Ser Leu Ala Asn Gly Trp	845	850	855
Gly Ser Ala Ser Glu Asp Asn Ala Ala Ser Ala Arg Ala Ser Leu	860	865	870
Val Ser Ser Ser Asp Gly Ser Phe Leu Ala Asp Ala His Phe Ala	875	880	885
Arg Ala Leu Ala Val Ala Val Asp Ser Phe Gly Phe Gly Leu Glu	890	895	900
Pro Arg Glu Ala Asp Cys Val Phe Ile Asp Ala Ser Ser Pro Pro	905	910	915
Ser Pro Arg Asp Glu Ile Phe Leu Thr Pro Asn Leu Ser Leu Pro	920	925	930
Leu Trp Glu Trp Arg Pro Asp Trp Leu Glu Asp Met Glu Val Ser	935	940	945
His Thr Gln Arg Leu Gly Arg Gly Met Pro Pro Trp Pro Pro Asp	950	955	960
Ser Gln Ile Ser Ser Gln Arg Ser Gln Leu His Cys Arg Met Pro	965	970	975
Lys Ala Gly Ala Ser Pro Val Asp Tyr Ser	980	985	

<210> 212  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 212  
gaaggacct acatgtgtgt ggcc 24

<210> 213  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 213  
actgaccttc cagctgagcc acac 24

<210> 214  
<211> 50  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 214  
aggactacac ggagcctgtg gagcttctgg ctgtgcgaat tcagctggaa 50

<210> 215  
<211> 2749  
<212> DNA  
<213> Homo sapiens

<220>  
<221> unsure  
<222> 1869, 1887  
<223> unknown base

<400> 215  
ctcccacggt gtccagcgcc cagaatgcgg cttctgggtcc tgctatgggg 50  
ttgcctgctg ctcccagggt atgaagccct ggagggccca gaggaaatca 100  
gcgggttcga aggggacact gtgtccctgc agtgcaacta cagggaagag 150  
ctgaggggacc accggaagta ctggtgcagg aagggtggga tcctcttctc 200  
tcgctgctct ggcaccatct atgcagaaga agaaggccag gagacaatga 250  
agggcagggt gtccatccgt gacagccgcc aggagctctc gtcattgtg 300

accctgtgga acctcacct gcaagacgct ggggagtact ggtgtgggt 350  
 cgaaaaacgg ggccccgatg agtctttact gatctctctg ttcgtcttct 400  
 caggaccctg ctgtcctccc tccccttctc ccaccttcca gcctctggct 450  
 acaacacgcc tgcagcccaa ggcaaaagct cagcaaacc agccccagg 500  
 attgacttct cctgggctct acccggcagc caccacagcc aagcagggga 550  
 agacaggggc tgaggccct ccattgccag ggacttcca gtacgggcac 600  
 gaaaggactt ctcagtacac aggaacctct cctaccccag cgacctctcc 650  
 tctgcaggg agctcccgcc ccccatgca gctggactcc acctcagcag 700  
 aggacaccag tccagctctc agcagtggca gctctaagcc caggggtgtcc 750  
 atcccgatgg tccgcatact ggccccagtc ctgggtgctgc tgagccttct 800  
 gtcagccgca ggccctgatg ccttctgcag ccacctgctc ctgtggagaa 850  
 aggaagctca acaggccacg gagacacaga ggaacgagaa gttctggctc 900  
 tcacgcttga ctgcggagga aaaggaagcc ccttcccagg cccctgaggg 950  
 ggacgtgatc tcgatgcctc ccctccacac atctgaggag gagctgggct 1000  
 tctcgaagtt tgtctcagcg tagggcagga ggccctcctg gccaggccag 1050  
 cagtgaagca gtatggctgg ctggatcagc accgattccc gaaagcttct 1100  
 cacctcagcc tcagagtcca gctgcccga ctccagggt ctccccacc 1150  
 tcccagggt ctctcttgc atgttccagc ctgacctaga agcgtttgtc 1200  
 agccctggag ccagagcgg tggccttgc ctccggctg gagactggga 1250  
 catccctgat aggttcacat ccctgggcag agtaccaggc tgctgaccct 1300  
 cagcagggcc agacaaggct cagtggatct ggtctgagtt tcaatctgcc 1350  
 aggaactcct gggcctcatg ccagtgctg gaccctgcct tcctccact 1400  
 ccagacccca ccttgtcttc cctccctggc gtcctcagac ttagtccac 1450  
 ggtctcctgc atcagctggg gatgaagagg agcatgctgg ggtgagactg 1500  
 ggattctggc ttctctttga accacctgca tccagccctt caggaagcct 1550  
 gtgaaaaacg tgattcctgg`ccccaccaag acccaccaaa accatctctg 1600  
 ggcttggctg aggactctga attctaaca tgcccagtga ctgtcgact 1650  
 tgagtttgag ggccagtggt cctgatgaac gctcacacc cttcagctta 1700  
 gagtctgcat ttgggctgtg acgtctccac ctgcccacat agatctgctc 1750

tgtctgcgac accagatcca cgtggggact cccctgaggc ctgctaagtc 1800  
 caggccttgg tcaggtcagg tgcacattgc aggataagcc caggaccggc 1850  
 acagaagtgg ttgcctttnc catttgcctt ccttgggncca tgccttcttg 1900  
 cctttggaaa aaatgatgaa gaaaaccttg gctccttcct tgtctggaaa 1950  
 gggttacttg cctatgggtt ctggtggcta gagagaaaag tagaaaacca 2000  
 gagtgcacgt aggtgtctaa cacagaggag agtaggaaca gggcggatac 2050  
 ctgaaggtga ctccgagtcc agccccctgg agaaggggtc gggggtggtg 2100  
 gtaaagtagc acaactacta ttttttttct ttttccatta ttattgtttt 2150  
 ttaagacaga atctcgtgct gctgcccagg ctggagtgca gtggcacgat 2200  
 ctgcaaactc cgcctcctgg gttcaagtga ttcttctgcc tcagcctccc 2250  
 gagtagctgg gattacaggc acgcaccacc acacctggct aatttttgta 2300  
 cttttagtag agatgggggtt tcaccatgtt ggccaggctg gtcttgaact 2350  
 cctgacctca aatgagcctc ctgcttcagt ctcccaaatt gccgggatta 2400  
 caggcatgag ccaactgtgtc tggccctatt tccttttaaaa agtgaaatta 2450  
 agagttgttc agtatgcaaa acttggaag atggaggaga aaaagaaaag 2500  
 gaagaaaaaa atgtcaccca tagtctcacc agagactatc attatttcgt 2550  
 tttgtgttac ttcttccac tcttttcttc ttcacataat ttgccggtgt 2600  
 tctttttaca gagcaattat cttgtatata caactttgta tcctgccttt 2650  
 tccaccttat cgttccatca ctttattcca gcacttctct gtgttttaca 2700  
 gaccttttta taaataaaat gttcatcagc tgcataaaaa aaaaaaaaaa 2749

<210> 216

<211> 332

<212> PRT

<213> Homo sapiens

<400> 216

Met	Arg	Leu	Leu	Val	Leu	Leu	Trp	Gly	Cys	Leu	Leu	Leu	Pro	Gly
1				5				10					15	

Tyr	Glu	Ala	Leu	Glu	Gly	Pro	Glu	Glu	Ile	Ser	Gly	Phe	Glu	Gly
			20					25					30	

Asp	Thr	Val	Ser	Leu	Gln	Cys	Thr	Tyr	Arg	Glu	Glu	Leu	Arg	Asp
			35					40					45	

His Arg Lys Tyr Trp Cys Arg Lys Gly Gly Ile Leu Phe Ser Arg

50					55					60				
Cys	Ser	Gly	Thr	Ile	Tyr	Ala	Glu	Glu	Glu	Gly	Gln	Glu	Thr	Met
				65					70					75
Lys	Gly	Arg	Val	Ser	Ile	Arg	Asp	Ser	Arg	Gln	Glu	Leu	Ser	Leu
				80					85					90
Ile	Val	Thr	Leu	Trp	Asn	Leu	Thr	Leu	Gln	Asp	Ala	Gly	Glu	Tyr
				95					100					105
Trp	Cys	Gly	Val	Glu	Lys	Arg	Gly	Pro	Asp	Glu	Ser	Leu	Leu	Ile
				110					115					120
Ser	Leu	Phe	Val	Phe	Pro	Gly	Pro	Cys	Cys	Pro	Pro	Ser	Pro	Ser
				125					130					135
Pro	Thr	Phe	Gln	Pro	Leu	Ala	Thr	Thr	Arg	Leu	Gln	Pro	Lys	Ala
				140					145					150
Lys	Ala	Gln	Gln	Thr	Gln	Pro	Pro	Gly	Leu	Thr	Ser	Pro	Gly	Leu
				155					160					165
Tyr	Pro	Ala	Ala	Thr	Thr	Ala	Lys	Gln	Gly	Lys	Thr	Gly	Ala	Glu
				170					175					180
Ala	Pro	Pro	Leu	Pro	Gly	Thr	Ser	Gln	Tyr	Gly	His	Glu	Arg	Thr
				185					190					195
Ser	Gln	Tyr	Thr	Gly	Thr	Ser	Pro	His	Pro	Ala	Thr	Ser	Pro	Pro
				200					205					210
Ala	Gly	Ser	Ser	Arg	Pro	Pro	Met	Gln	Leu	Asp	Ser	Thr	Ser	Ala
				215					220					225
Glu	Asp	Thr	Ser	Pro	Ala	Leu	Ser	Ser	Gly	Ser	Ser	Lys	Pro	Arg
				230					235					240
Val	Ser	Ile	Pro	Met	Val	Arg	Ile	Leu	Ala	Pro	Val	Leu	Val	Leu
				245					250					255
Leu	Ser	Leu	Leu	Ser	Ala	Ala	Gly	Leu	Ile	Ala	Phe	Cys	Ser	His
				260					265					270
Leu	Leu	Leu	Trp	Arg	Lys	Glu	Ala	Gln	Gln	Ala	Thr	Glu	Thr	Gln
				275					280					285
Arg	Asn	Glu	Lys	Phe	Trp	Leu	Ser	Arg	Leu	Thr	Ala	Glu	Glu	Lys
				290					295					300
Glu	Ala	Pro	Ser	Gln	Ala	Pro	Glu	Gly	Asp	Val	Ile	Ser	Met	Pro
				305					310					315
Pro	Leu	His	Thr	Ser	Glu	Glu	Glu	Leu	Gly	Phe	Ser	Lys	Phe	Val
				320					325					330
Ser	Ala													

<210> 217  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 217  
ccctgcagtg cacctacagg gaag 24

<210> 218  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 218  
ctgtcttccc ctgcttggt gtgg 24

<210> 219  
<211> 47  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 219  
ggtgcaggaa ggggtgggac ctcttctctc gctgctctgg ccacatc 47

<210> 220  
<211> 950  
<212> DNA  
<213> Homo sapiens

<400> 220  
ttgtgactaa aagctggcct agcaggccag ggagtgcagc tgcaggcgtg 50  
gggggtggcag gagccgcaga gccagagcag acagccgaga aacagggtgga 100  
cagtgtgaaa gaaccagtgg tctcgctctg ttgccaggc tagagtgtac 150  
tggcgtgac atagctcact gcagcctcag actcctggac ttgagaaatc 200  
ctcctgcctt agcctcctgc atatctggga ctccaggggt gcactcaagc 250  
cctgtttctt ctccttctgt gagtggacca cggaggctgg tgagctgcct 300  
gtcatcccaa agctcagetc tgagccagag tgggtggtggc tccacctctg 350  
ccgccggcat agaagccagg agcagggctc tcagaaggcg gtggtgccca 400



gctgggatca tgttggtggc cctggtctgt ctgctcagct gcctgctacc 450  
 ctccagttag gccaaagtctt acggtcgttg tgaactggcc agagtgtac 500  
 atgacttcgg gctggacgga taccggggat acagcctggc tgactgggtc 550  
 tgccttgctt atttcacaag cggtttcaac gcagctgctt tggactacga 600  
 ggctgatggg agcaccaaca acgggatctt ccagatcaac agccggaggt 650  
 ggtgcagcaa cctcaccocg aacgtcccca acgtgtgccg gatgtactgc 700  
 tcagatttgt tgaatcctaa tctcaaggat accgttatct gtgccatgaa 750  
 gataacccaa gagcctcagg gtctgggtta ctgggaggcc tggaggcatc 800  
 actgccaggg aaaagacctc actgaatggg tggatggctg tgacttctag 850  
 gatggacgga accatgcaca gcaggctggg aaatgtggtt tggttcctga 900  
 cctaggcttg ggaagacaag ccagcgaata aaggatggtt gaacgtgaaa 950

<210> 221

<211> 146

<212> PRT

<213> Homo sapiens

<400> 221

Met	Leu	Leu	Ala	Leu	Val	Cys	Leu	Leu	Ser	Cys	Leu	Leu	Pro	Ser
1				5					10					15
Ser	Glu	Ala	Lys	Leu	Tyr	Gly	Arg	Cys	Glu	Leu	Ala	Arg	Val	Leu
				20					25					30
His	Asp	Phe	Gly	Leu	Asp	Gly	Tyr	Arg	Gly	Tyr	Ser	Leu	Ala	Asp
				35					40					45
Trp	Val	Cys	Leu	Ala	Tyr	Phe	Thr	Ser	Gly	Phe	Asn	Ala	Ala	Ala
				50					55					60
Leu	Asp	Tyr	Glu	Ala	Asp	Gly	Ser	Thr	Asn	Asn	Gly	Ile	Phe	Gln
				65					70					75
Ile	Asn	Ser	Arg	Arg	Trp	Cys	Ser	Asn	Leu	Thr	Pro	Asn	Val	Pro
				80					85					90
Asn	Val	Cys	Arg	Met	Tyr	Cys	Ser	Asp	Leu	Leu	Asn	Pro	Asn	Leu
				95					100					105
Lys	Asp	Thr	Val	Ile	Cys	Ala	Met	Lys	Ile	Thr	Gln	Glu	Pro	Gln
				110					115					120
Gly	Leu	Gly	Tyr	Trp	Glu	Ala	Trp	Arg	His	His	Cys	Gln	Gly	Lys
				125					130					135
Asp	Leu	Thr	Glu	Trp	Val	Asp	Gly	Cys	Asp	Phe				
				140					145					

<210> 222  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 222  
gggatcatgt tggtggccct ggtc 24

<210> 223  
<211> 23  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 223  
gcaaggcaga ccagtcagc cag 23

<210> 224  
<211> 45  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 224  
ctgcctgcta ccctccaagt gaggccaagc tctacggtcg ttgtg 45

<210> 225  
<211> 2049  
<212> DNA  
<213> Homo sapiens

<400> 225  
agccgctgcc ccgggccggg cgcccgcggc ggcacatga gtccccgctc 50  
gtgcctgcgt tcgctgcgcc tcctcgtctt cgccgtcttc tcagccgccg 100  
cgagcaactg gctgtacctg gccaaagtgt cgtcgggtggg gagcatctca 150  
gaggaggaga cgtgcgagaa actcaagggc ctgatccaga ggcaggtgca 200  
gatgtgcaag cggaacctgg aagtcattga ctccgtgcgc cgccgtgccc 250  
agctggccat tgaggagtgc cagtaccagt tccggaaccg gcgctggaac 300  
tgctccacac tcgactcctt gcccgctctt ggcaaggtgg tgacgcaagg 350  
gactcgggag gcggccttcg tgtacgcat ctcttcggca ggtgtggcct 400  
ttgcagtgac gcgggcgtgc agcagtgggg agctggagaa gtgcggctgt 450

gacaggacag tgcatggggt cagcccacag ggcttccagt ggtcaggatg 500  
ctctgacaac atcgccctacg gtgtggcctt ctacacagtcg tttgtggatg 550  
tgcgggagag aagcaagggg gcctcgtcca gcagagccct catgaacctc 600  
cacaacaatg aggccggcag gaaggccatc ctgacacaca tgcgggtgga 650  
atgcaagtgc cacggggtgt caggctcctg tgaggtaaag acgtgctggc 700  
gagccgtgcc gcccttcgc cagggtgggtc acgcactgaa ggagaagttt 750  
gatggtgcc ctgagggtgga gccacgccgc gtgggctcct ccagggcact 800  
ggtaccacgc aacgcacagt tcaagccgca cacagatgag gacctggtgt 850  
acttgagacc tagccccgac ttctgtgagc aggacatgcg cagcggcgtg 900  
ctgggcacga ggggcgcac atgcaacaag acgtccaagg ccatcgacgg 950  
ctgtgagctg ctgtgctgtg gccgcggctt ccacacggcg cagggtggagc 1000  
tggtgaacg ctgcagctgc aaattccact ggtgctgctt cgtcaagtgc 1050  
cggcagtgcc agcggctcgt ggagttgcac acgtgccgat gaccgcctgc 1100  
ctagccctgc gccggcaacc acctagtggc ccagggaagg ccgataatth 1150  
aaacagtctc ccaccaccta cccaagaga tactggttgt atthttttht 1200  
ctggtthtgt thttgggtcc tcatgttatt tattgccgaa accaggcagg 1250  
caaccccaag ggcaccaacc agggcctccc caaagcctgg gcctthtgg 1300  
ctgccactga ccaaggggac cttgctcgtg ccgctggctg cccgcatgtg 1350  
gctgccactg accactcagt tgttatctgt gtccgtthtt ctacttgcag 1400  
acctaaagggt gagtaacaag gagtattacc accacatggc tactgaccgt 1450  
gtcatcgggg aagagggggc cttatggcag ggaaaatagg taccgacttg 1500  
atggaagtca caccctctgg aaaaaagaac tcttaactct ccagcacaca 1550  
tacacatgga ctcttgccag cttgagccta gaagccatgt ctctcaaatg 1600  
ccctgagaaa ggaacaagc agataccagg tcaagggcac caggttcatt 1650  
tcagccctta catggacagc tagaggttcg atatctgtgg gtccctccag 1700  
gcaagaagag ggagatgaga gcaagagacg actgaagtcc caccctagaa 1750  
cccagcctgc cccagcctgc ccctgggaag aggaaactta accactcccc 1800  
agaccacct aggcaggcat ataggctgcc atctggacc agggatcccc 1850

gctgtgcctt tgcagtcacg cccgagtcac ctttcacagc gctgttcctc 1900  
catgaaactg aaaaacacac acacacacac acacacacac acacacacac 1950  
acacacacac ggacacacac acacacctgc gagagagagg gaggaaaggg 2000  
ctgtgccttt gcagtcacgc ccgagtcacc tttcacagca ctgttcctc 2049

<210> 226

<211> 351

<212> PRT

<213> Homo sapiens

<400> 226

Met	Ser	Pro	Arg	Ser	Cys	Leu	Arg	Ser	Leu	Arg	Leu	Leu	Val	Phe	1	5	10	15
Ala	Val	Phe	Ser	Ala	Ala	Ala	Ser	Asn	Trp	Leu	Tyr	Leu	Ala	Lys	20	25	30	
Leu	Ser	Ser	Val	Gly	Ser	Ile	Ser	Glu	Glu	Glu	Thr	Cys	Glu	Lys	35	40	45	
Leu	Lys	Gly	Leu	Ile	Gln	Arg	Gln	Val	Gln	Met	Cys	Lys	Arg	Asn	50	55	60	
Leu	Glu	Val	Met	Asp	Ser	Val	Arg	Arg	Gly	Ala	Gln	Leu	Ala	Ile	65	70	75	
Glu	Glu	Cys	Gln	Tyr	Gln	Phe	Arg	Asn	Arg	Arg	Trp	Asn	Cys	Ser	80	85	90	
Thr	Leu	Asp	Ser	Leu	Pro	Val	Phe	Gly	Lys	Val	Val	Thr	Gln	Gly	95	100	105	
Thr	Arg	Glu	Ala	Ala	Phe	Val	Tyr	Ala	Ile	Ser	Ser	Ala	Gly	Val	110	115	120	
Ala	Phe	Ala	Val	Thr	Arg	Ala	Cys	Ser	Ser	Gly	Glu	Leu	Glu	Lys	125	130	135	
Cys	Gly	Cys	Asp	Arg	Thr	Val	His	Gly	Val	Ser	Pro	Gln	Gly	Phe	140	145	150	
Gln	Trp	Ser	Gly	Cys	Ser	Asp	Asn	Ile	Ala	Tyr	Gly	Val	Ala	Phe	155	160	165	
Ser	Gln	Ser	Phe	Val	Asp	Val	Arg	Glu	Arg	Ser	Lys	Gly	Ala	Ser	170	175	180	
Ser	Ser	Arg	Ala	Leu	Met	Asn	Leu	His	Asn	Asn	Glu	Ala	Gly	Arg	185	190	195	
Lys	Ala	Ile	Leu	Thr	His	Met	Arg	Val	Glu	Cys	Lys	Cys	His	Gly	200	205	210	
Val	Ser	Gly	Ser	Cys	Glu	Val	Lys	Thr	Cys	Trp	Arg	Ala	Val	Pro				

215	220	225
Pro Phe Arg Gln Val Gly His Ala Leu Lys Glu Lys Phe Asp Gly		
230	235	240
Ala Thr Glu Val Glu Pro Arg Arg Val Gly Ser Ser Arg Ala Leu		
245	250	255
Val Pro Arg Asn Ala Gln Phe Lys Pro His Thr Asp Glu Asp Leu		
260	265	270
Val Tyr Leu Glu Pro Ser Pro Asp Phe Cys Glu Gln Asp Met Arg		
275	280	285
Ser Gly Val Leu Gly Thr Arg Gly Arg Thr Cys Asn Lys Thr Ser		
290	295	300
Lys Ala Ile Asp Gly Cys Glu Leu Leu Cys Cys Gly Arg Gly Phe		
305	310	315
His Thr Ala Gln Val Glu Leu Ala Glu Arg Cys Ser Cys Lys Phe		
320	325	330
His Trp Cys Cys Phe Val Lys Cys Arg Gln Cys Gln Arg Leu Val		
335	340	345
Glu Leu His Thr Cys Arg		
350		

<210> 227  
 <211> 23  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 227  
 gctgcagctg caaattccac tgg 23

<210> 228  
 <211> 28  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 228  
 tgggtgggaga ctgtttaaat tatcggcc 28

<210> 229  
 <211> 41  
 <212> DNA  
 <213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 229

tgcttcgtca agtgccggca gtgccagcgg ctogtggagt t 41

<210> 230

<211> 1355

<212> DNA

<213> Homo sapiens

<400> 230

cggacgcgtg ggcggacgcg tgggcggacg cgtgggcgga cgcgtgggct 50  
gggtgcctgc atcgccatgg acaccaccag gtacagcaag tggggcggca 100  
gctccgagga ggtccccgga gggccctggg gacgctgggt gcactggagc 150  
aggagacccc tcttcttggc cctggctgtc ctggtcacca cagtcctttg 200  
ggctgtgatt ctgagtatcc tattgtccaa ggcctccacg gagcgcgcgg 250  
cgctgcttga cggccacgac ctgctgagga caaacgcctc gaagcagacg 300  
gcggcgctgg gtgccctgaa ggaggaggtc ggagactgcc acagctgctg 350  
ctcggggacg caggcgcagc tgcagaccac gcgcgcggag cttggggagg 400  
cgcaggcgaa gctgatggag caggagagcg ccctgcggga actgcgtgag 450  
cgcgtgaccc agggcttggc tgaagccggc aggggcccgtg aggacgtccg 500  
cactgagctg ttccggggcg tggaggccgt gaggtccag aacaactcct 550  
gcgagccgtg cccacgctcg tggctgtcct tcgagggtc ctgctacttt 600  
ttctctgtgc caaagacgac gtgggcggcg gcgcaggatc actgcgcaga 650  
tgccagcgcg cacctgggtga tcgttggggg cctggatgag cagggttcc 700  
tcactcggaa cacgcgtggc cgtggttact ggctgggcct gagggtgtg 750  
cgccatctgg gcaaggttca gggctaccag tgggtggacg gagtctctct 800  
cagcttcagc cactggaacc agggagagcc caatgacgt tgggggcgcg 850  
agaactgtgt catgatgctg cacacggggc tgtggaacga cgcaccgtgt 900  
gacagcgaga aggacggctg gatctgtgag aaaaggcaca actgctgacc 950  
ccgcccagtg ccctggagcc gcgcccattg cagcatgtcg tctcctgggg 1000  
gctgtcacc tccctggctc ctggagctga ttgccaaaga gtttttttct 1050  
tcctcatcca ccgtgctga gtctcagaaa cacttggccc aacatagccc 1100  
tgtccagccc agtgcttggg ctctgggacc tccatgccga cctcatccta 1150

actccactca cgcagaccca acctaacctc cactagctcc aaaatccctg 1200  
 ctctgcgctc cccgtgatat gcctccactt ctctccctaa ccaaggtag 1250  
 gtgactgagg actggagctg tttggttttc tcgcattttc caccaaactg 1300  
 gaagctgttt ttgcagcctg aggaagcatc aataaatatt tgagaaatga 1350  
 aaaaa 1355

<210> 231  
 <211> 293  
 <212> PRT  
 <213> Homo sapiens

<400> 231  
 Met Asp Thr Thr Arg Tyr Ser Lys Trp Gly Gly Ser Ser Glu Glu  
     1                    5                    10                    15  
 Val Pro Gly Gly Pro Trp Gly Arg Trp Val His Trp Ser Arg Arg  
                     20                    25                    30  
 Pro Leu Phe Leu Ala Leu Ala Val Leu Val Thr Thr Val Leu Trp  
                     35                    40                    45  
 Ala Val Ile Leu Ser Ile Leu Leu Ser Lys Ala Ser Thr Glu Arg  
                     50                    55                    60  
 Ala Ala Leu Leu Asp Gly His Asp Leu Leu Arg Thr Asn Ala Ser  
                     65                    70                    75  
 Lys Gln Thr Ala Ala Leu Gly Ala Leu Lys Glu Glu Val Gly Asp  
                     80                    85                    90  
 Cys His Ser Cys Cys Ser Gly Thr Gln Ala Gln Leu Gln Thr Thr  
                     95                    100                    105  
 Arg Ala Glu Leu Gly Glu Ala Gln Ala Lys Leu Met Glu Gln Glu  
                     110                    115                    120  
 Ser Ala Leu Arg Glu Leu Arg Glu Arg Val Thr Gln Gly Leu Ala  
                     125                    130                    135  
 Glu Ala Gly Arg Gly Arg Glu Asp Val Arg Thr Glu Leu Phe Arg  
                     140                    145                    150  
 Ala Leu Glu Ala Val Arg Leu Gln Asn Asn Ser Cys Glu Pro Cys  
                     155                    160                    165  
 Pro Thr Ser Trp Leu Ser Phe Glu Gly Ser Cys Tyr Phe Phe Ser  
                     170                    175                    180  
 Val Pro Lys Thr Thr Trp Ala Ala Ala Gln Asp His Cys Ala Asp  
                     185                    190                    195  
 Ala Ser Ala His Leu Val Ile Val Gly Gly Leu Asp Glu Gln Gly  
                     200                    205                    210

Phe	Leu	Thr	Arg	Asn	Thr	Arg	Gly	Arg	Gly	Tyr	Trp	Leu	Gly	Leu
				215					220					225
Arg	Ala	Val	Arg	His	Leu	Gly	Lys	Val	Gln	Gly	Tyr	Gln	Trp	Val
				230					235					240
Asp	Gly	Val	Ser	Leu	Ser	Phe	Ser	His	Trp	Asn	Gln	Gly	Glu	Pro
				245					250					255
Asn	Asp	Ala	Trp	Gly	Arg	Glu	Asn	Cys	Val	Met	Met	Leu	His	Thr
				260					265					270
Gly	Leu	Trp	Asn	Asp	Ala	Pro	Cys	Asp	Ser	Glu	Lys	Asp	Gly	Trp
				275					280					285
Ile	Cys	Glu	Lys	Arg	His	Asn	Cys							
				290										

<210> 232  
 <211> 24  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 232  
 gcgagaactg tgtcatgatg ctgc 24

<210> 233  
 <211> 24  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 233  
 gtttctgaga ctccagcagcg gtgg 24

<210> 234  
 <211> 50  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 234  
 caccgtgtga cagcgagaag gacggctgga tctgtgagaa aaggcacaac 50

<210> 235  
 <211> 1847  
 <212> DNA  
 <213> Homo sapiens



<400> 235

gccaggggaa gagggatgac cgacccgggg aaggtcgctg ggcagggcga 50  
gttgggaaag cggcagcccc cgccgcccc gcagcccctt ctctctcttt 100  
ctcccacgtc ctatctgcct ctcgctggag gccaggccgt gcagcatcga 150  
agacaggagg aactggagcc tcattggccg gccggggcg ccggcctcgg 200  
gcttaaatag gagctccggg ctctggctgg gacccgaccg ctgccggccg 250  
cgctcccgt gctcctgccg ggtgatggaa aaccccagcc cggccgccgc 300  
cctgggcaag gccctctgcg ctctctctct ggccactctc ggcgccgccg 350  
gccagcctct tgggggagag tccatctgtt ccgccagagc cccggccaaa 400  
tacagcatca ccttcacggg caagtggagc cagacggcct tccccagca 450  
gtaccccctg ttccgcccc ctgcgcagtg gtcttcgctg ctggggggccg 500  
cgcatagctc cgactacagc atgtggagga agaaccagta cgtcagtaac 550  
gggctgcgcg actttgcgga gcgcggcgag gcctgggcgc tgatgaagga 600  
gatcgaggcg gcgggggagg cgctgcagag cgtgcacgag gtgttttcgg 650  
cgcccgcgt cccagcggc accgggcaga cgtcggcgga gctggaggtg 700  
cagcgcaggc actcgctggt ctcgtttgtg gtgcgcatcg tgcccagccc 750  
cgactggttc gtgggcgtgg acagcctgga cctgtgcgac ggggaccgtt 800  
ggcgggaaca ggcggcgctg gacctgtacc cctacgacgc cgggacggac 850  
agcggcttca cttctcctc ccccaacttc gccaccatcc cgcaggacac 900  
ggtgaccgag ataacgtcct cctctcccag ccacccggcc aactccttct 950  
actaccgcg gctgaaggcc ctgcctccca tcgccagggt gacactgctg 1000  
cggctgcgac agagccccag ggccttcac cctcccgcc cagtctgcc 1050  
cagcagggac aatgagattg tagacagcgc ctcaattcca gaaacgccgc 1100  
tggaactcga ggtctccctg tggctgctct ggggactgtg cggaggccac 1150  
tgtgggaggc tcgggaccaa gagcaggact cgctacgtcc ggggccagcc 1200  
cgccaacaac gggagcccct gccccgagct cgaagaagag gctgagtgcg 1250  
tcctgataa ctgctctaa gaccagagcc ccgcagcccc tggggccccc 1300  
cggagccatg ggggtgcggg ggctcctgtg caggctcatg ctgcaggcgg 1350  
ccgagggcac agggggttct gcgctgctcc tgaccgcggt gaggcgcgc 1400

cgaccatctc tgcactgaag ggccctctgg tggccggcac gggcattggg 1450  
 aaacagcctc ctcccttccc aaccttgctt cttaggggcc cccgtgtccc 1500  
 gtctgtcttc agcctcctcc tctgcagga taaagtcac cccaaggctc 1550  
 cagctactct aaattatgtc tccttataag ttattgctgc tccaggagat 1600  
 tgccttcat cgtccagggg cctggctccc acgtggttgc agatacctca 1650  
 gacctggtgc tctaggctgt gctgagccca ctctcccgag ggcgcatcca 1700  
 agcggggggc acttgagaag tgaataaatg gggcggtttc ggaagcgta 1750  
 gtgtttccat gttatggatc tctctgcgtt tgaataaaga ctatctctgt 1800  
 tgctcacaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaa 1847

<210> 236

<211> 331

<212> PRT

<213> Homo sapiens

<400> 236

Met	Glu	Asn	Pro	Ser	Pro	Ala	Ala	Ala	Leu	Gly	Lys	Ala	Leu	Cys	1	5	10	15
Ala	Leu	Leu	Leu	Ala	Thr	Leu	Gly	Ala	Ala	Gly	Gln	Pro	Leu	Gly	20	25	30	
Gly	Glu	Ser	Ile	Cys	Ser	Ala	Arg	Ala	Pro	Ala	Lys	Tyr	Ser	Ile	35	40	45	
Thr	Phe	Thr	Gly	Lys	Trp	Ser	Gln	Thr	Ala	Phe	Pro	Lys	Gln	Tyr	50	55	60	
Pro	Leu	Phe	Arg	Pro	Pro	Ala	Gln	Trp	Ser	Ser	Leu	Leu	Gly	Ala	65	70	75	
Ala	His	Ser	Ser	Asp	Tyr	Ser	Met	Trp	Arg	Lys	Asn	Gln	Tyr	Val	80	85	90	
Ser	Asn	Gly	Leu	Arg	Asp	Phe	Ala	Glu	Arg	Gly	Glu	Ala	Trp	Ala	95	100	105	
Leu	Met	Lys	Glu	Ile	Glu	Ala	Ala	Gly	Glu	Ala	Leu	Gln	Ser	Val	110	115	120	
His	Glu	Val	Phe	Ser	Ala	Pro	Ala	Val	Pro	Ser	Gly	Thr	Gly	Gln	125	130	135	
Thr	Ser	Ala	Glu	Leu	Glu	Val	Gln	Arg	Arg	His	Ser	Leu	Val	Ser	140	145	150	
Phe	Val	Val	Arg	Ile	Val	Pro	Ser	Pro	Asp	Trp	Phe	Val	Gly	Val	155	160	165	

Asp	Ser	Leu	Asp	Leu	Cys	Asp	Gly	Asp	Arg	Trp	Arg	Glu	Gln	Ala	
				170					175					180	
Ala	Leu	Asp	Leu	Tyr	Pro	Tyr	Asp	Ala	Gly	Thr	Asp	Ser	Gly	Phe	
				185					190					195	
Thr	Phe	Ser	Ser	Pro	Asn	Phe	Ala	Thr	Ile	Pro	Gln	Asp	Thr	Val	
				200					205					210	
Thr	Glu	Ile	Thr	Ser	Ser	Ser	Pro	Ser	His	Pro	Ala	Asn	Ser	Phe	
				215					220					225	
Tyr	Tyr	Pro	Arg	Leu	Lys	Ala	Leu	Pro	Pro	Ile	Ala	Arg	Val	Thr	
				230					235					240	
Leu	Leu	Arg	Leu	Arg	Gln	Ser	Pro	Arg	Ala	Phe	Ile	Pro	Pro	Ala	
				245					250					255	
Pro	Val	Leu	Pro	Ser	Arg	Asp	Asn	Glu	Ile	Val	Asp	Ser	Ala	Ser	
				260					265					270	
Val	Pro	Glu	Thr	Pro	Leu	Asp	Cys	Glu	Val	Ser	Leu	Trp	Ser	Ser	
				275					280					285	
Trp	Gly	Leu	Cys	Gly	Gly	His	Cys	Gly	Arg	Leu	Gly	Thr	Lys	Ser	
				290					295					300	
Arg	Thr	Arg	Tyr	Val	Arg	Val	Gln	Pro	Ala	Asn	Asn	Gly	Ser	Pro	
				305					310					315	
Cys	Pro	Glu	Leu	Glu	Glu	Glu	Ala	Glu	Cys	Val	Pro	Asp	Asn	Cys	
				320					325					330	

Val

<210> 237

<211> 22

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 237

cagcactgcc aggggaagag gg 22

<210> 238

<211> 18

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 238

caggactcgc tacgtccg 18

<210> 239  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 239  
cagccccttc tcctcctttc tccc 24

<210> 240  
<211> 25  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 240  
gcagttatca gggacgcact cagcc 25

<210> 241  
<211> 18  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 241  
ccagcgagag gcagatag 18

<210> 242  
<211> 23  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 242  
cggtcaccgt gtcctgcggg atg 23

<210> 243  
<211> 42  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 243  
cagccccttc tcctcctttc tcccacgtcc tatctgcctc tc 42

<210> 244

<211> 1894

<212> DNA

<213> Homo sapiens

<400> 244

ggcggcgctc gtgaggggct cctttgggca ggggtagtgt ttggtgtccc 50  
tgtcttgctg gatattgaca aactgaagct ttcctgcacc actggactta 100  
aggaagagtg tactcgtagg cggacagctt tagtggccgg ccggccgctc 150  
tcatcccccg taaggagcag agtcctttgt actgaccaag atgagcaaca 200  
tctacatcca ggagcctccc acgaatggga aggttttatt gaaaactaca 250  
gctggagata ttgacataga gttgtggtcc aaagaagctc ctaaagcttg 300  
cagaaatfff atccaactff gtttggaagc ttattatgac aataccatff 350  
ttcatagagt tgtgcctggt ttcatagtcc aaggcggaga tcctactggc 400  
acagggagtg gtggagagtc tatctatgga gcgccattca aagatgaatt 450  
tcattcacgg ttgcgtffta atcggagagg actggttgcc atggcaaattg 500  
ctggttctca tgataatggc agccagttff tcttcacact gggtcgagca 550  
gatgaactta acaataagca taccatctff ggaaaggffa caggggatac 600  
agtatataac atgttgcgac tgtcagaagt agacattgat gatgacgaaa 650  
gaccacataa tccacacaaa ataaaaagct gtgaggffff gfftaatcct 700  
fftgatgaca tcattccaag ggaaattaaa aggctgaaaa aagagaaacc 750  
agaggaggaa gtaaagaaat tgaaacccaa aggcacaaaa aatffftagtt 800  
tactfftcatt tggagaggaa gctgaggaa agaggaggaa agtaaatcga 850  
gfftagtcaga gcatgaaggg caaaagcaaa agtagtcatt acttgcttaa 900  
ggatgatcca catctcagtt ctgffccagt tgtagaaagt gaaaaagggtg 950  
atgcaccaga tfftagffgat gatggagaag atgaaagttc agagcatgat 1000  
gaatatattg atggtgatga aaagaacctg atgagagaaa gaattgccaa 1050  
aaaattaaaa aaggacacaa gtgcgaattg taaatcagct ggagaaggag 1100  
aagtggagaa gaaatcagtc agccgcagtg aagagctcag aaaagaagca 1150  
agacaattaa aacgggaact cfftagcagca aaacaaaaaa aagtagaaaa 1200  
tgcagcaaaa caagcagaaa aaagaagtga agaggaagaa gccctccag 1250  
atggtgctgt tgccgaatac agaagagaaa agcaaaagta tgaagctffg 1300

aggaagcaac agtcaaagaa gggaacttcc cggaagatc agacccttgc 1350  
 actgctgaac cagtttaaat ctaaactcac tcaagcaatt gctgaaacac 1400  
 ctgaaaatga cattcctgaa acagaagtag aagatgatga aggatggatg 1450  
 tcacatgtac ttcagtttga ggataaaagc agaaaagtga aagatgcaag 1500  
 catgcaagac tcagatacat ttgaaatcta tgatcctcgg aatccagtga 1550  
 ataaaagaag gagggaagaa agcaaaaagc tgatgagaga gaaaaaagaa 1600  
 agaagataaa atgagaataa tgataaccag aacttgctgg aaatgtgcct 1650  
 acaatggcct tgtaacagcc attgttccca acagcatcac ttaggggtgt 1700  
 gaaaagaagt atttttgaac ctgttgctg gttttgaaaa acaattatct 1750  
 tgttttgcaa attgtggaat gatgtaagca aatgcttttg gttactggta 1800  
 catgtgtttt ttcttagctg accttttata ttgctaaatc tgaaataaaa 1850  
 taactttcct tccacaaaaa aaaaaaaaaa aaaaaaaaaa aaaa 1894

<210> 245

<211> 472

<212> PRT

<213> Homo sapiens

<400> 245

Met	Ser	Asn	Ile	Tyr	Ile	Gln	Glu	Pro	Pro	Thr	Asn	Gly	Lys	Val
1				5					10					15
Leu	Leu	Lys	Thr	Thr	Ala	Gly	Asp	Ile	Asp	Ile	Glu	Leu	Trp	Ser
			20						25					30
Lys	Glu	Ala	Pro	Lys	Ala	Cys	Arg	Asn	Phe	Ile	Gln	Leu	Cys	Leu
			35						40					45
Glu	Ala	Tyr	Tyr	Asp	Asn	Thr	Ile	Phe	His	Arg	Val	Val	Pro	Gly
			50						55					60
Phe	Ile	Val	Gln	Gly	Gly	Asp	Pro	Thr	Gly	Thr	Gly	Ser	Gly	Gly
			65						70					75
Glu	Ser	Ile	Tyr	Gly	Ala	Pro	Phe	Lys	Asp	Glu	Phe	His	Ser	Arg
			80						85					90
Leu	Arg	Phe	Asn	Arg	Arg	Gly	Leu	Val	Ala	Met	Ala	Asn	Ala	Gly
			95						100					105
Ser	His	Asp	Asn	Gly	Ser	Gln	Phe	Phe	Phe	Thr	Leu	Gly	Arg	Ala
			110						115					120
Asp	Glu	Leu	Asn	Asn	Lys	His	Thr	Ile	Phe	Gly	Lys	Val	Thr	Gly
			125						130					135

Asp Thr Val Tyr	Asn Met Leu Arg Leu	Ser Glu Val Asp Ile	Asp
	140	145	150
Asp Asp Glu Arg	Pro His Asn Pro His	Lys Ile Lys Ser Cys	Glu
	155	160	165
Val Leu Phe Asn	Pro Phe Asp Asp Ile	Ile Pro Arg Glu Ile	Lys
	170	175	180
Arg Leu Lys Lys	Glu Lys Pro Glu Glu	Glu Val Lys Lys Leu	Lys
	185	190	195
Pro Lys Gly Thr	Lys Asn Phe Ser Leu	Leu Ser Phe Gly Glu	Glu
	200	205	210
Ala Glu Glu Glu	Glu Glu Glu Val Asn	Arg Val Ser Gln Ser	Met
	215	220	225
Lys Gly Lys Ser	Lys Ser Ser His Asp	Leu Leu Lys Asp Asp	Pro
	230	235	240
His Leu Ser Ser	Val Pro Val Val Glu	Ser Glu Lys Gly Asp	Ala
	245	250	255
Pro Asp Leu Val	Asp Asp Gly Glu Asp	Glu Ser Ala Glu His	Asp
	260	265	270
Glu Tyr Ile Asp	Gly Asp Glu Lys Asn	Leu Met Arg Glu Arg	Ile
	275	280	285
Ala Lys Lys Leu	Lys Lys Asp Thr Ser	Ala Asn Val Lys Ser	Ala
	290	295	300
Gly Glu Gly Glu	Val Glu Lys Lys Ser	Val Ser Arg Ser Glu	Glu
	305	310	315
Leu Arg Lys Glu	Ala Arg Gln Leu Lys	Arg Glu Leu Leu Ala	Ala
	320	325	330
Lys Gln Lys Lys	Val Glu Asn Ala Ala	Lys Gln Ala Glu Lys	Arg
	335	340	345
Ser Glu Glu Glu	Glu Ala Pro Pro Asp	Gly Ala Val Ala Glu	Tyr
	350	355	360
Arg Arg Glu Lys	Gln Lys Tyr Glu Ala	Leu Arg Lys Gln Gln	Ser
	365	370	375
Lys Lys Gly Thr	Ser Arg Glu Asp Gln	Thr Leu Ala Leu Leu	Asn
	380	385	390
Gln Phe Lys Ser	Lys Leu Thr Gln Ala	Ile Ala Glu Thr Pro	Glu
	395	400	405
Asn Asp Ile Pro	Glu Thr Glu Val Glu	Asp Asp Glu Gly Trp	Met
	410	415	420

Ser His Val Leu Gln Phe Glu Asp Lys Ser Arg Lys Val Lys Asp  
425 430 435

Ala Ser Met Gln Asp Ser Asp Thr Phe Glu Ile Tyr Asp Pro Arg  
440 445 450

Asn Pro Val Asn Lys Arg Arg Arg Glu Glu Ser Lys Lys Leu Met  
455 460 465

Arg Glu Lys Lys Glu Arg Arg  
470

<210> 246

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 246

tgcggagatc ctactggcac aggg 24

<210> 247

<211> 18

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 247

cgagtttagtc agagcatg 18

<210> 248

<211> 18

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 248

cagatgggtgc tgttgccg 18

<210> 249

<211> 29

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 249

caactggaac aggaactgag atgtggatc 29

<210> 250



<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 250  
ctggttcagc agtgcaaggg tctg 24

<210> 251  
<211> 18  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 251  
cctctccgat taaaacgc 18

<210> 252  
<211> 45  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 252  
gagaggactg gttgccatgg caaatgctgg ttctcatgat aatgg 45

<210> 253  
<211> 2456  
<212> DNA  
<213> Homo sapiens

<400> 253  
cgccgcccgtt ggggctggaa gttcccgccca ggtccgtgcc gggcgagaga 50  
gatgctgccc ggcccgcctc ggctttgagg cgagagaagt gtcccagacc 100  
catttcgcct tgctgacggc gtcgagccct ggccagacat gtccacaggg 150  
ttctccttcg ggtccgggac tctgggctcc accaccgtgg ccgcccggcg 200  
gaccagcaca ggcggcggtt tctccttcgg aacgggaacg tctagcaacc 250  
cttctgtggg gctcaatttt ggaaatcttg gaagtacttc aactccagca 300  
actacatctg ctcttcaag tggttttgga accgggctct ttggatctaa 350  
acctgccact gggttcactc taggaggaac aaatacaggt gccttgacac 400  
ccaagaggcc tcaagtggc accaaatatg gaaccctgca aggaaaacag 450  
atgcatgtgg ggaagacacc catccaagtc tttttaggag tccccttctc 500

cagacctcct ctaggtatcc tcaggtttgc acctccagaa cccccggagc 550  
cctggaaagg aatcagagat gctaccacct acccgctgg atggagtctc 600  
gctctgtcgc caggctggag tgcagtggca cgatctcggc tcaactgcaac 650  
ctccgcctcc cgggttcaag cgagtctcct gcctcagcct ctgagtgtct 700  
ggggctacag gtgcctgcag gagtccctggg gccagctggc ctcgatgtac 750  
gtcagcacgc gggaaacggta caagtggctg cgcttcagcg aggactgtct 800  
gtacctgaac gtgtacgcgc cggcgcgcg gcgcggggat cccagctgc 850  
cagtgatggc ctggttcccg ggaggcgcc tcatcgtggg cgctgcttct 900  
tcgtacgagg gctctgactt ggccgcccgc gagaaagtgg tgctgggtgtt 950  
tctgcagcac aggctcggca tcttcggctt cctgagcacg gacgacagcc 1000  
acgcgcgcgg gaactggggg ctgctggacc agatggcggc tctgcgctgg 1050  
gtgcaggaga acatcgagc cttcggggga gaccaggaa atgtgacct 1100  
gttcggccag tcggcggggg ccatgagcat ctgaggactg atgatgtcac 1150  
ccctagcctc gggctctctc catcgggcca tttcccagag tggcaccgag 1200  
ttattcagac ttttcatcac tagtaaccCa ctgaaagtgg ccaagaaggt 1250  
tgcccacctg gctggatgca accacaacag cacacagatc ctggtaaact 1300  
gcctgagggc actatcaggg accaagggtga tgcgtgtgtc caacaagatg 1350  
agattcctcc aactgaactt ccagagagac ccggaagaga ttatctggtc 1400  
catgagccct gtggtggatg gtgtggtgat cccagatgac cctttggtgc 1450  
tcctgaccca ggggaaggtt tcatctgtgc cctaccttct aggtgtcaac 1500  
aacctggaat tcaattggct cttgccttat aatatcacca aggagcaggt 1550  
accacttggt gtggaggagt acctggacaa tgtcaatgag catgactgga 1600  
agatgctacg aaaccgtatg atggacatag ttcaagatgc cactttcgtg 1650  
tatgccacac tgcagactgc tcaactaccac cgagaaaccc caatgatggg 1700  
aatctgcctt gctggccacg ctacaacaag gatgaaaagt acctgcagct 1750  
ggattttacc acaagagtgg gcatgaagct caaggagaag aagatggctt 1800  
tttgatgag tctgtaccag tctcaaagac ctgagaagca gaggcaattc 1850  
taagggtggc tatgcaggaa ggagccaaag aggggtttgc cccaccatc 1900

caggccctgg ggagactagc catggacata cctggggaca agagttctac 1950  
 ccaccccagt ttagaactgc aggagctccc tgctgcctcc aggccaaagc 2000  
 tagagctttt gcctgttgtg tgggacctgc actgcccttt ccagcctgac 2050  
 atcccatgat gccctctac ttcactgttg acatccagtt aggccaggcc 2100  
 ctgtcaacac cacactgtgc tcagctctcc agcctcagga caacctcttt 2150  
 ttttcccttc ttcaaactct cccacccttc aatgtctcct tgtgactcct 2200  
 tcttatggga ggtcgaccca gactgccact gccctgtca ctgcacccag 2250  
 cttggcattt accatccatc ctgctcaacc ttgttctgt ctgttcacat 2300  
 tggcctggag gcctagggca ggttgtgaca tggagcaaac ttttgtagt 2350  
 ttgggatctt ctctcccacc cacacttatc tccccaggc cactccaaa 2400  
 gtctatacac aggggtggtc tcttcaataa agaagtgttg attagaaaaa 2450  
 aaaaaa 2456

<210> 254

<211> 545

<212> PRT

<213> Homo sapiens

<400> 254

Met	Ser	Thr	Gly	Phe	Ser	Phe	Gly	Ser	Gly	Thr	Leu	Gly	Ser	Thr	1	5	10	15
Thr	Val	Ala	Ala	Gly	Gly	Thr	Ser	Thr	Gly	Gly	Val	Phe	Ser	Phe	20	25	30	
Gly	Thr	Gly	Thr	Ser	Ser	Asn	Pro	Ser	Val	Gly	Leu	Asn	Phe	Gly	35	40	45	
Asn	Leu	Gly	Ser	Thr	Ser	Thr	Pro	Ala	Thr	Thr	Ser	Ala	Pro	Ser	50	55	60	
Ser	Gly	Phe	Gly	Thr	Gly	Leu	Phe	Gly	Ser	Lys	Pro	Ala	Thr	Gly	65	70	75	
Phe	Thr	Leu	Gly	Gly	Thr	Asn	Thr	Gly	Ala	Leu	His	Thr	Lys	Arg	80	85	90	
Pro	Gln	Val	Val	Thr	Lys	Tyr	Gly	Thr	Leu	Gln	Gly	Lys	Gln	Met	95	100	105	
His	Val	Gly	Lys	Thr	Pro	Ile	Gln	Val	Phe	Leu	Gly	Val	Pro	Phe	110	115	120	
Ser	Arg	Pro	Pro	Leu	Gly	Ile	Leu	Arg	Phe	Ala	Pro	Pro	Glu	Pro	125	130	135	

Pro	Glu	Pro	Trp	Lys	Gly	Ile	Arg	Asp	Ala	Thr	Thr	Tyr	Pro	Pro	140	145	150
Gly	Trp	Ser	Leu	Ala	Leu	Ser	Pro	Gly	Trp	Ser	Ala	Val	Ala	Arg	155	160	165
Ser	Arg	Leu	Thr	Ala	Thr	Ser	Ala	Ser	Arg	Val	Gln	Ala	Ser	Leu	170	175	180
Leu	Pro	Gln	Pro	Leu	Ser	Val	Trp	Gly	Tyr	Arg	Cys	Leu	Gln	Glu	185	190	195
Ser	Trp	Gly	Gln	Leu	Ala	Ser	Met	Tyr	Val	Ser	Thr	Arg	Glu	Arg	200	205	210
Tyr	Lys	Trp	Leu	Arg	Phe	Ser	Glu	Asp	Cys	Leu	Tyr	Leu	Asn	Val	215	220	225
Tyr	Ala	Pro	Ala	Arg	Ala	Pro	Gly	Asp	Pro	Gln	Leu	Pro	Val	Met	230	235	240
Val	Trp	Phe	Pro	Gly	Gly	Ala	Phe	Ile	Val	Gly	Ala	Ala	Ser	Ser	245	250	255
Tyr	Glu	Gly	Ser	Asp	Leu	Ala	Ala	Arg	Glu	Lys	Val	Val	Leu	Val	260	265	270
Phe	Leu	Gln	His	Arg	Leu	Gly	Ile	Phe	Gly	Phe	Leu	Ser	Thr	Asp	275	280	285
Asp	Ser	His	Ala	Arg	Gly	Asn	Trp	Gly	Leu	Leu	Asp	Gln	Met	Ala	290	295	300
Ala	Leu	Arg	Trp	Val	Gln	Glu	Asn	Ile	Ala	Ala	Phe	Gly	Gly	Asp	305	310	315
Pro	Gly	Asn	Val	Thr	Leu	Phe	Gly	Gln	Ser	Ala	Gly	Ala	Met	Ser	320	325	330
Ile	Ser	Gly	Leu	Met	Met	Ser	Pro	Leu	Ala	Ser	Gly	Leu	Phe	His	335	340	345
Arg	Ala	Ile	Ser	Gln	Ser	Gly	Thr	Ala	Leu	Phe	Arg	Leu	Phe	Ile	350	355	360
Thr	Ser	Asn	Pro	Leu	Lys	Val	Ala	Lys	Lys	Val	Ala	His	Leu	Ala	365	370	375
Gly	Cys	Asn	His	Asn	Ser	Thr	Gln	Ile	Leu	Val	Asn	Cys	Leu	Arg	380	385	390
Ala	Leu	Ser	Gly	Thr	Lys	Val	Met	Arg	Val	Ser	Asn	Lys	Met	Arg	395	400	405
Phe	Leu	Gln	Leu	Asn	Phe	Gln	Arg	Asp	Pro	Glu	Glu	Ile	Ile	Trp	410	415	420

Ser Met Ser Pro Val Val Asp Gly Val Val Ile Pro Asp Asp Pro	425	430	435
Leu Val Leu Leu Thr Gln Gly Lys Val Ser Ser Val Pro Tyr Leu	440	445	450
Leu Gly Val Asn Asn Leu Glu Phe Asn Trp Leu Leu Pro Tyr Asn	455	460	465
Ile Thr Lys Glu Gln Val Pro Leu Val Val Glu Glu Tyr Leu Asp	470	475	480
Asn Val Asn Glu His Asp Trp Lys Met Leu Arg Asn Arg Met Met	485	490	495
Asp Ile Val Gln Asp Ala Thr Phe Val Tyr Ala Thr Leu Gln Thr	500	505	510
Ala His Tyr His Arg Glu Thr Pro Met Met Gly Ile Cys Pro Ala	515	520	525
Gly His Ala Thr Thr Arg Met Lys Ser Thr Cys Ser Trp Ile Leu	530	535	540
Pro Gln Glu Trp Ala	545		

<210> 255

<211> 23

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 255

agggtgcctgc aggagtcctg ggg 23

<210> 256

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 256

ccacctcagg aagccgaaga tgcc 24

<210> 257

<211> 45

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 257

gaacggtaca agtggctgcg cttcagcgag gactgtctgt acctg 45

<210> 258

<211> 2764

<212> DNA

<213> Homo sapiens

<400> 258

gagaacaggc ctgtctcagg caggccctgc gcctcctatg cgagatgct 50

actgccactg ctgctgtcct cgctgctggg cgggtcccag gctatggatg 100

ggagattctg gatacagagt caggagtcag tgatggtgcc ggagggcctg 150

tgcattctctg tgccctgctc tttctcctac ccccgacaag actggacagg 200

gtctacccca gcttatggct actggttcaa agcagtgact gagacaacca 250

aggggtgctcc tgtggccaca aaccaccaga gtcgagaggt ggaaatgagc 300

acccggggcc gattccagct cactggggat cccgccaagg ggaactgctc 350

cttggtgatc agagacgcgc agatgcagga tgagtcacag tacttctttc 400

gggtggagag aggaagctat gtgacatata atttcatgaa cgatgggttc 450

tttctaaaag taacagtgtc cagcttcacg cccagacccc aggaccacaa 500

caccgacctc acctgccatg tggacttctc cagaaagggt gtgagcgcac 550

agaggaccgt ccgactccgt gtggcctatg ccccagaga ccttgttatc 600

agcatttcac gtgacaacac gccagccctg gagccccagc cccagggaaa 650

tgtcccatat ctggaagccc aaaaaggcca gttcctgcgg ctctctctgtg 700

ctgctgacag ccagccccct gccacactga gctgggtcct gcagaacaga 750

gtcctctcct cgtcccatcc ctggggccct agaccctgg ggctggagct 800

gcccgggggtg aaggctgggg attcagggcg ctacacctgc cgagcggaga 850

acaggcttgg ctcccagcag cgagccctgg acctctctgt gcagtatcct 900

ccagagaacc tgagagtgat ggtttcccaa gcaaacagga cagtcttgga 950

aaaccttggg aacggcacgt ctctcccagt actggagggc caaagcctgt 1000

gcctgggtctg tgtcacacac agcagcccc cagccaggct gagctggacc 1050

cagaggggac aggttctgag cccctcccag cctcagacc ccggggctcct 1100

ggagctgcct cgggttcaag tggagcacga aggagagttc acctgccacg 1150

ctcggcacc actgggtcc cagcaegtct ctctcagcct ctccgtgcac 1200

tataagaagg gactcatctc aacggcattc tccaacggag cgtttctggg 1250  
aatcggcatac acggctcttc ttttctctg cctggccctg atcatcatga 1300  
agattctacc gaagagacgg actcagacag aaaccccgag gccaggttc 1350  
tcccggcaca gcacgatcct ggattacatc aatgtggtcc cgacggctgg 1400  
ccccctggct cagaagcgga atcagaaagc cacaccaaac agtcctcgga 1450  
cccctcctcc accaggtgct ccctcccag aatcaaagaa gaaccagaaa 1500  
aagcagtatc agttgccag tttccagaa cccaaatcat ccactcaagc 1550  
cccagaatcc caggagagcc aagaggagct ccattatgcc acgctcaact 1600  
tcccaggcgt cagacccagg cctgaggccc ggatgccaa gggcaccag 1650  
gcggattatg cagaagtcaa gttccaatga ggtctctta ggcttttagga 1700  
ctgggacttc ggctagggag gaaggtagag taagaggttg aagataacag 1750  
agtgc aaagt ttcttctct ccctctctct ctctcttct ctctctctct 1800  
ctcttctct ctcttttaa aaaacatctg gccagggcac agtggctcac 1850  
gcctgtaatc ccagcacttt gggagggtga ggtgggcaga tcgcctgagg 1900  
tcgggagttc gagaccagcc tggccaactt ggtgaaacc cgtctctact 1950  
aaaaatacaa aaattagctg ggcattggtg caggcgctg taatcctacc 2000  
tacttgggaa gctgaggcag gagaatcact tgaacctggg agacggaggt 2050  
tgcagtgagc caagatcaca ccattgcag ccagcctggg caacaaagcg 2100  
agactccatc tcaaaaaaaaa aatcctccaa atgggttggg tgtctgtaat 2150  
cccagcactt tgggaggcta aggtgggtg attgcttgag cccaggagtt 2200  
cgagaccagc ctgggcaaca tggtgaaacc ccatctctac aaaaaataca 2250  
aaacatagct gggcttggtg gtgtgtgcct gtagtcccag ctgtcagaca 2300  
tttaaaccag agcaactcca tctggaatag gagctgaata aatgaggct 2350  
gagacctact gggctgcatt ctcagacagt ggaggcattc taagtcacag 2400  
gatgagacag gaggtccgta caagatacag gtcataaaga ctttgctgat 2450  
aaaacagatt gcagtaaaga agccaaccaa atcccaccaa aaccaagttg 2500  
gccacgagag tgacctctg tcgtcctcac tgctacactc ctgacagcac 2550  
catgacagtt taaaaatgcc atggcaacat caggaagtta cccgatatgt 2600  
cccaaaaggg ggaggaatga ataatccacc ccttgtttag caaataagca 2650

agaaataacc ataaaagtgg gcaaccagca gctctaggcg ctgctcttgt 2700  
 cstatggagta gccattcttt tgttccttta ctttcttaat aaacttgctt 2750  
 tcaccttaaa aaaa 2764

<210> 259

<211> 544

<212> PRT

<213> Homo sapiens

<400> 259

Met	Leu	Leu	Pro	Leu	Leu	Leu	Ser	Ser	Leu	Leu	Gly	Gly	Ser	Gln	1	5	10	15
Ala	Met	Asp	Gly	Arg	Phe	Trp	Ile	Arg	Val	Gln	Glu	Ser	Val	Met	20	25	30	
Val	Pro	Glu	Gly	Leu	Cys	Ile	Ser	Val	Pro	Cys	Ser	Phe	Ser	Tyr	35	40	45	
Pro	Arg	Gln	Asp	Trp	Thr	Gly	Ser	Thr	Pro	Ala	Tyr	Gly	Tyr	Trp	50	55	60	
Phe	Lys	Ala	Val	Thr	Glu	Thr	Thr	Lys	Gly	Ala	Pro	Val	Ala	Thr	65	70	75	
Asn	His	Gln	Ser	Arg	Glu	Val	Glu	Met	Ser	Thr	Arg	Gly	Arg	Phe	80	85	90	
Gln	Leu	Thr	Gly	Asp	Pro	Ala	Lys	Gly	Asn	Cys	Ser	Leu	Val	Ile	95	100	105	
Arg	Asp	Ala	Gln	Met	Gln	Asp	Glu	Ser	Gln	Tyr	Phe	Phe	Arg	Val	110	115	120	
Glu	Arg	Gly	Ser	Tyr	Val	Thr	Tyr	Asn	Phe	Met	Asn	Asp	Gly	Phe	125	130	135	
Phe	Leu	Lys	Val	Thr	Val	Leu	Ser	Phe	Thr	Pro	Arg	Pro	Gln	Asp	140	145	150	
His	Asn	Thr	Asp	Leu	Thr	Cys	His	Val	Asp	Phe	Ser	Arg	Lys	Gly	155	160	165	
Val	Ser	Ala	Gln	Arg	Thr	Val	Arg	Leu	Arg	Val	Ala	Tyr	Ala	Pro	170	175	180	
Arg	Asp	Leu	Val	Ile	Ser	Ile	Ser	Arg	Asp	Asn	Thr	Pro	Ala	Leu	185	190	195	
Glu	Pro	Gln	Pro	Gln	Gly	Asn	Val	Pro	Tyr	Leu	Glu	Ala	Gln	Lys	200	205	210	
Gly	Gln	Phe	Leu	Arg	Leu	Leu	Cys	Ala	Ala	Asp	Ser	Gln	Pro	Pro	215	220	225	



Ala Thr Leu Ser Trp Val Leu Gln Asn Arg Val Leu Ser Ser Ser	230	235	240
His Pro Trp Gly Pro Arg Pro Leu Gly Leu Glu Leu Pro Gly Val	245	250	255
Lys Ala Gly Asp Ser Gly Arg Tyr Thr Cys Arg Ala Glu Asn Arg	260	265	270
Leu Gly Ser Gln Gln Arg Ala Leu Asp Leu Ser Val Gln Tyr Pro	275	280	285
Pro Glu Asn Leu Arg Val Met Val Ser Gln Ala Asn Arg Thr Val	290	295	300
Leu Glu Asn Leu Gly Asn Gly Thr Ser Leu Pro Val Leu Glu Gly	305	310	315
Gln Ser Leu Cys Leu Val Cys Val Thr His Ser Ser Pro Pro Ala	320	325	330
Arg Leu Ser Trp Thr Gln Arg Gly Gln Val Leu Ser Pro Ser Gln	335	340	345
Pro Ser Asp Pro Gly Val Leu Glu Leu Pro Arg Val Gln Val Glu	350	355	360
His Glu Gly Glu Phe Thr Cys His Ala Arg His Pro Leu Gly Ser	365	370	375
Gln His Val Ser Leu Ser Leu Ser Val His Tyr Lys Lys Gly Leu	380	385	390
Ile Ser Thr Ala Phe Ser Asn Gly Ala Phe Leu Gly Ile Gly Ile	395	400	405
Thr Ala Leu Leu Phe Leu Cys Leu Ala Leu Ile Ile Met Lys Ile	410	415	420
Leu Pro Lys Arg Arg Thr Gln Thr Glu Thr Pro Arg Pro Arg Phe	425	430	435
Ser Arg His Ser Thr Ile Leu Asp Tyr Ile Asn Val Val Pro Thr	440	445	450
Ala Gly Pro Leu Ala Gln Lys Arg Asn Gln Lys Ala Thr Pro Asn	455	460	465
Ser Pro Arg Thr Pro Pro Pro Pro Gly Ala Pro Ser Pro Glu Ser	470	475	480
Lys Lys Asn Gln Lys Lys Gln Tyr Gln Leu Pro Ser Phe Pro Glu	485	490	495
Pro Lys Ser Ser Thr Gln Ala Pro Glu Ser Gln Glu Ser Gln Glu	500	505	510

Glu Leu His Tyr Ala Thr Leu Asn Phe Pro Gly Val Arg Pro Arg  
515 520 525

Pro Glu Ala Arg Met Pro Lys Gly Thr Gln Ala Asp Tyr Ala Glu  
530 535 540

Val Lys Phe Gln

<210> 260

<211> 22

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 260

caaagcctgc gcctggtctg tg 22

<210> 261

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 261

ttctggagcc cagaggtgc tgag 24

<210> 262

<211> 45

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 262

ggagctgccca cccattcaaa tggagcacga aggagagttc acctg 45

<210> 263

<211> 2857

<212> DNA

<213> Homo sapiens

<400> 263

tgaagagtaa tagttggaat caaaagagtc aacgcaatga actgttattt 50

actgctgcgt tttatgttg gaattcctct cctatggcct tgtcttgag 100

caacagaaaa ctctcaaaca aagaaagtca agcagccagt gcgatctcat 150

ttgagagtga agcgtggctg ggtgtggaac caattttttg taccagagga 200

aatgaatacg actagtcac acatcgcca gctaagatct gatttagaca 250  
atggaaacaa ttctttccag tacaagcttt tgggagctgg agctggaagt 300  
acttttatca ttgatgaaag aacaggtgac atatatgcca tacagaagct 350  
tgatagagag gagcgatccc tctacatctt aagagcccag gtaatagaca 400  
tcgctactgg aagggtctgt gaacctgagt ctgagtttgt catcaaagtt 450  
tcggatatca atgacaatga accaaaattc ctagatgaac cttatgaggc 500  
cattgtacca gagatgtctc cagaaggaaac attagttatc cagggtgacag 550  
caagtgatgc tgacgatccc tcaagtggta ataatgctcg tctcctctac 600  
agcttacttc aaggccagcc atatTTTTtct gttgaaccaa caacaggagt 650  
cataagaata tcttctaaaa tggatagaga actgcaagat gagtattggg 700  
taatcattca agccaaggac atgattggtc agccaggagc gttgtctgga 750  
acaacaagtg tattaattaa actttcagat gttaatgaca ataagcctat 800  
atttaaagaa agtttatacc gcttgactgt ctctgaatct gcacccactg 850  
ggacttctat aggaacaatc atggcatatg ataatgacat aggagagaat 900  
gcagaaatgg attacagcat tgaagaggat gattcgcaaa catttgacat 950  
tattactaat catgaaactc aagaaggaaat agttatatta aaaaagaaag 1000  
tggattttga gcaccagaac cactacggta ttagagcaaa agttaaaaac 1050  
catcatgttc ctgagcagct catgaagtac cacactgagg cttccaccac 1100  
tttcattaag atccaggtgg aagatgttga tgagcctcct cttttcctcc 1150  
ttccatatta tgtatttgaa gtttttgaag aaacccaca gggatcattt 1200  
gtaggcgtgg tgtctgccac agaccagac aataggaaat ctctatcag 1250  
gtattctatt actaggagca aagtgttcaa tatcaatgat aatggtacaa 1300  
tactacaag taactcactg gatcgtgaaa tcagtgttg gtacaaccta 1350  
agtattacag ccacagaaaa atacaatata gaacagatct cttegatccc 1400  
actgtatgtg caagttctta acatcaatga tcatgtcct gagttctctc 1450  
aatactatga gacttatgtt tgtgaaaatg caggctctgg tcaggtaatt 1500  
cagactatca gtgcagtgg tagagatgaa tccatagaag agcaccattt 1550  
ttactttaat ctatctgtag aagacactaa caattcaagt ttacaatca 1600  
tagataatca agataacaca gctgtcattt tgactaatag aactggtttt 1650

aaccttcaag aagaacctgt cttctacatc tccatcttaa ttgccgacaa 1700  
tggaatcccg tcacttacia gtacaaacac ccttaccatc catgtctgtg 1750  
actgtggtga cagtgggagc acacagacct gccagtacca ggagcttgtg 1800  
ctttccatgg gattcaagac agaagttatc attgctattc tcatttgcac 1850  
tatgatcata tttgggttta tttttttgac tttgggttta aaacaacgga 1900  
gaaaacagat tctatttcct gagaaaagtg aagatttcag agagaatata 1950  
ttccaatatg atgatgaagg ggggtggagaa gaagatacag aggcctttga 2000  
tatagcagag ctgaggagta gtaccataat gcgggaacgc aagactcgga 2050  
aaaccacaag cgctgagatc aggagcctat acaggcagtc tttgcaagtt 2100  
ggccccgaca gtgcatatatt caggaaattc attctggaaa agctcgaaga 2150  
agctaatact gatccgtgtg cccctccttt tgattccctc cagacctacg 2200  
cttttgaggg aacaggggtca ttagctggat ccctgagctc cttagaatca 2250  
gcagtctctg atcaggatga aagctatgat taccttaatg agttgggacc 2300  
tcgctttaaa agattagcat gcatgtttgg ttctgcagtg cagtcaaata 2350  
attagggctt tttaccatca aaatttttaa aagtgctaatt gtgtattcga 2400  
acccaatggg agtcttaaag agttttgtgc cctggctcta tggcggggaa 2450  
agccctagtc tatggagttt tctgatttcc ctggagtaaa tactccatgg 2500  
ttatttttaag ctacctacat gctgtcattg aacagagatg tggggagaaa 2550  
tgtaaacaat cagctcacag gcatcaatac aaccagattt gaagtaaaat 2600  
aatgtaggaa gatattaaaa gtagatgaga ggacacaaga ttagtgcgat 2650  
ccttatgcga ttatatcatt atttacttag gaaagagtaa aaataccaaa 2700  
cgagaaaatt taaaggagca aaaatttgca agtcaaatag aaatgtacaa 2750  
atcgagataa catttacatt tctatcatat tgacatgaaa attgaaaatg 2800  
tatagtcaga gaaattttca tgaattattc catgaagtat tgtttccttt 2850  
atttaaa 2857

<210> 264

<211> 772

<212> PRT

<213> Homo sapiens

<400> 264

Met	Asn	Cys	Tyr	Leu	Leu	Leu	Arg	Phe	Met	Leu	Gly	Ile	Pro	Leu	1	5	10	15
Leu	Trp	Pro	Cys	Leu	Gly	Ala	Thr	Glu	Asn	Ser	Gln	Thr	Lys	Lys	20	25	30	
Val	Lys	Gln	Pro	Val	Arg	Ser	His	Leu	Arg	Val	Lys	Arg	Gly	Trp	35	40	45	
Val	Trp	Asn	Gln	Phe	Phe	Val	Pro	Glu	Glu	Met	Asn	Thr	Thr	Ser	50	55	60	
His	His	Ile	Gly	Gln	Leu	Arg	Ser	Asp	Leu	Asp	Asn	Gly	Asn	Asn	65	70	75	
Ser	Phe	Gln	Tyr	Lys	Leu	Leu	Gly	Ala	Gly	Ala	Gly	Ser	Thr	Phe	80	85	90	
Ile	Ile	Asp	Glu	Arg	Thr	Gly	Asp	Ile	Tyr	Ala	Ile	Gln	Lys	Leu	95	100	105	
Asp	Arg	Glu	Glu	Arg	Ser	Leu	Tyr	Ile	Leu	Arg	Ala	Gln	Val	Ile	110	115	120	
Asp	Ile	Ala	Thr	Gly	Arg	Ala	Val	Glu	Pro	Glu	Ser	Glu	Phe	Val	125	130	135	
Ile	Lys	Val	Ser	Asp	Ile	Asn	Asp	Asn	Glu	Pro	Lys	Phe	Leu	Asp	140	145	150	
Glu	Pro	Tyr	Glu	Ala	Ile	Val	Pro	Glu	Met	Ser	Pro	Glu	Gly	Thr	155	160	165	
Leu	Val	Ile	Gln	Val	Thr	Ala	Ser	Asp	Ala	Asp	Asp	Pro	Ser	Ser	170	175	180	
Gly	Asn	Asn	Ala	Arg	Leu	Leu	Tyr	Ser	Leu	Leu	Gln	Gly	Gln	Pro	185	190	195	
Tyr	Phe	Ser	Val	Glu	Pro	Thr	Thr	Gly	Val	Ile	Arg	Ile	Ser	Ser	200	205	210	
Lys	Met	Asp	Arg	Glu	Leu	Gln	Asp	Glu	Tyr	Trp	Val	Ile	Ile	Gln	215	220	225	
Ala	Lys	Asp	Met	Ile	Gly	Gln	Pro	Gly	Ala	Leu	Ser	Gly	Thr	Thr	230	235	240	
Ser	Val	Leu	Ile	Lys	Leu	Ser	Asp	Val	Asn	Asp	Asn	Lys	Pro	Ile	245	250	255	
Phe	Lys	Glu	Ser	Leu	Tyr	Arg	Leu	Thr	Val	Ser	Glu	Ser	Ala	Pro	260	265	270	
Thr	Gly	Thr	Ser	Ile	Gly	Thr	Ile	Met	Ala	Tyr	Asp	Asn	Asp	Ile	275	280	285	

Gly	Glu	Asn	Ala	Glu	Met	Asp	Tyr	Ser	Ile	Glu	Glu	Asp	Asp	Ser	
				290					295					300	
Gln	Thr	Phe	Asp	Ile	Ile	Thr	Asn	His	Glu	Thr	Gln	Glu	Gly	Ile	
				305					310					315	
Val	Ile	Leu	Lys	Lys	Lys	Val	Asp	Phe	Glu	His	Gln	Asn	His	Tyr	
				320					325					330	
Gly	Ile	Arg	Ala	Lys	Val	Lys	Asn	His	His	Val	Pro	Glu	Gln	Leu	
				335					340					345	
Met	Lys	Tyr	His	Thr	Glu	Ala	Ser	Thr	Thr	Phe	Ile	Lys	Ile	Gln	
				350					355					360	
Val	Glu	Asp	Val	Asp	Glu	Pro	Pro	Leu	Phe	Leu	Leu	Pro	Tyr	Tyr	
				365					370					375	
Val	Phe	Glu	Val	Phe	Glu	Glu	Thr	Pro	Gln	Gly	Ser	Phe	Val	Gly	
				380					385					390	
Val	Val	Ser	Ala	Thr	Asp	Pro	Asp	Asn	Arg	Lys	Ser	Pro	Ile	Arg	
				395					400					405	
Tyr	Ser	Ile	Thr	Arg	Ser	Lys	Val	Phe	Asn	Ile	Asn	Asp	Asn	Gly	
				410					415					420	
Thr	Ile	Thr	Thr	Ser	Asn	Ser	Leu	Asp	Arg	Glu	Ile	Ser	Ala	Trp	
				425					430					435	
Tyr	Asn	Leu	Ser	Ile	Thr	Ala	Thr	Glu	Lys	Tyr	Asn	Ile	Glu	Gln	
				440					445					450	
Ile	Ser	Ser	Ile	Pro	Leu	Tyr	Val	Gln	Val	Leu	Asn	Ile	Asn	Asp	
				455					460					465	
His	Ala	Pro	Glu	Phe	Ser	Gln	Tyr	Tyr	Glu	Thr	Tyr	Val	Cys	Glu	
				470					475					480	
Asn	Ala	Gly	Ser	Gly	Gln	Val	Ile	Gln	Thr	Ile	Ser	Ala	Val	Asp	
				485					490					495	
Arg	Asp	Glu	Ser	Ile	Glu	Glu	His	His	Phe	Tyr	Phe	Asn	Leu	Ser	
				500					505					510	
Val	Glu	Asp	Thr	Asn	Asn	Ser	Ser	Phe	Thr	Ile	Ile	Asp	Asn	Gln	
				515					520					525	
Asp	Asn	Thr	Ala	Val	Ile	Leu	Thr	Asn	Arg	Thr	Gly	Phe	Asn	Leu	
				530					535					540	
Gln	Glu	Glu	Pro	Val	Phe	Tyr	Ile	Ser	Ile	Leu	Ile	Ala	Asp	Asn	
				545					550					555	
Gly	Ile	Pro	Ser	Leu	Thr	Ser	Thr	Asn	Thr	Leu	Thr	Ile	His	Val	
				560					565					570	

Cys	Asp	Cys	Gly	Asp	Ser	Gly	Ser	Thr	Gln	Thr	Cys	Gln	Tyr	Gln	
				575					580					585	
Glu	Leu	Val	Leu	Ser	Met	Gly	Phe	Lys	Thr	Glu	Val	Ile	Ile	Ala	
				590					595					600	
Ile	Leu	Ile	Cys	Ile	Met	Ile	Ile	Phe	Gly	Phe	Ile	Phe	Leu	Thr	
				605					610					615	
Leu	Gly	Leu	Lys	Gln	Arg	Arg	Lys	Gln	Ile	Leu	Phe	Pro	Glu	Lys	
				620					625					630	
Ser	Glu	Asp	Phe	Arg	Glu	Asn	Ile	Phe	Gln	Tyr	Asp	Asp	Glu	Gly	
				635					640					645	
Gly	Gly	Glu	Glu	Asp	Thr	Glu	Ala	Phe	Asp	Ile	Ala	Glu	Leu	Arg	
				650					655					660	
Ser	Ser	Thr	Ile	Met	Arg	Glu	Arg	Lys	Thr	Arg	Lys	Thr	Thr	Ser	
				665					670					675	
Ala	Glu	Ile	Arg	Ser	Leu	Tyr	Arg	Gln	Ser	Leu	Gln	Val	Gly	Pro	
				680					685					690	
Asp	Ser	Ala	Ile	Phe	Arg	Lys	Phe	Ile	Leu	Glu	Lys	Leu	Glu	Glu	
				695					700					705	
Ala	Asn	Thr	Asp	Pro	Cys	Ala	Pro	Pro	Phe	Asp	Ser	Leu	Gln	Thr	
				710					715					720	
Tyr	Ala	Phe	Glu	Gly	Thr	Gly	Ser	Leu	Ala	Gly	Ser	Leu	Ser	Ser	
				725					730					735	
Leu	Glu	Ser	Ala	Val	Ser	Asp	Gln	Asp	Glu	Ser	Tyr	Asp	Tyr	Leu	
				740					745					750	
Asn	Glu	Leu	Gly	Pro	Arg	Phe	Lys	Arg	Leu	Ala	Cys	Met	Phe	Gly	
				755					760					765	
Ser	Ala	Val	Gln	Ser	Asn	Asn									
				770											

<210> 265

<211> 349

<212> DNA

<213> Homo sapiens

<220>

<221> unsure

<222> 24, 60, 141, 226, 228, 249, 252

<223> unknown base

<400> 265

atttcaaggc cagccatatt tttntgttga accaacaaca ggagtcataa 50

gaatatttttn taaaatggat agagaactgc aagatgagta ttgggtaatc 100

attcaagcca aggacatgat tggtcagcca ggagcgttgt ntggaacaac 150  
aagtgtatta attaaacttt cagatgttaa tgacaataag cctatatatta 200  
aagaaagttt ataccgcttg actgtntntg aatctgcacc cactgggant 250  
tntataggaa caatcatggc atatgataat gacataggag agaatgcaga 300  
aatggattac agcattgaag aggatgattc gcaaacattt gacattatt 349

<210> 266

<211> 25

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 266

cttgactgtc tctgaatctg caccc 25

<210> 267

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 267

aagtgggtgga agcctccagt gtgg 24

<210> 268

<211> 52

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 268

ccactacggt attagagcaa aagttaaaaa ccatcatggt tcttgagca 50

gc 52

<210> 269

<211> 2747

<212> DNA

<213> Homo sapiens

<400> 269

gcaacctcag cttctagtat ccagactcca gcgcccggc gggcgaggac 50

cccaaccccg acccagagct tctccagcgg cggcgagcgc agcagggctc 100

ccgccttaa cttctccgc ggggcccagc caccttcggg agtcggggtt 150



gcccacctgc aaactctccg cttctgcac ctgccacccc tgagccagcg 200  
cgggcccccg agcgagtcac ggccaacgcg gggctgcagc tgttgggctt 250  
cattctcgcc ttctgggat ggatcggcgc catcgtcagc actgccctgc 300  
cccagtggag gatttactcc tatgccggcg acaacatcgt gaccgcccag 350  
gccatgtacg aggggctgtg gatgtcctgc gtgtgcaga gcaccgggca 400  
gatccagtgc aaagtctttg actccttgct gaatctgagc agcacattgc 450  
aagcaacccg tgcttgatg gtggttgga tctctctggg agtgatagca 500  
atctttgtgg ccaccgttg catgaagtgt atgaagtgt tggaagacga 550  
tgaggtgcag aagatgagga tggctgtcat tgggggtgcg atatttcttc 600  
ttgcaggtct ggctatttta gttgccacag catggtatgg caatagaatc 650  
gttcaagaat tctatgacct tatgaccca gtcaatgccg ggtacgaatt 700  
tggtcaggct ctcttactg gctgggctgc tgcctctctc tgccttctgg 750  
gaggtgccct actttgctgt tctgtcccc gaaaaacaac ctcttaccga 800  
acaccaaggc cctatccaaa acctgcacct tccagcggga aagactacgt 850  
gtgacacaga ggcaaaagga gaaatcatg ttgaaacaaa ccgaaaatgg 900  
acattgagat actatcatta acattaggac cttagaattt tgggtattgt 950  
aatctgaagt atggtattac aaaacaaaca aacaaacaaa aaacccatgt 1000  
gttaaaatac tcagtgttaa acatggctta atcttatttt atcttctttc 1050  
ctcaatatag gaggaagat tttccattt gtattactgc tccccattga 1100  
gtaatcatat tcaaatgggg gaaggggtgc tcttaaata tatatagata 1150  
tgtatatata catgtttttc tattaataat agacagtaaa atactattct 1200  
cattatgttg atactagcat acttaaaata tctctaaaat aggtaaatgt 1250  
atttaattcc atattgatga agatgtttat tgggtatattt tctttttcgt 1300  
ccttatatac atatgtaaca gtcaaatac atttactctt cttcattagc 1350  
tttgggtgcc tttgccaca gacctagcct aatttaccga ggatgaattc 1400  
tttcaattct tcatgctgc cttttcata tacttatttt attttttacc 1450  
ataatcttat agcacttgca tcgttattaa gcccttattt gttttgtgtt 1500  
tcattggtct ctatctctg aatctaacac atttcatagc ctacatttta 1550  
gtttctaaag ccaagaagaa ttattacaa atcagaactt tggaggcaaa 1600

tctttctgca tgaccaaagt gataaattcc tgttgacctt cccacacaat 1650  
 cccgtgactc tgacccatag cactcttggt tgctttgaaa atatttgtcc 1700  
 aattgagtag ctgcatgctg ttcccccagg tgttgtaaca caacttttatt 1750  
 gattgaattt ttaagctact tattcatagt tttatatccc cctaaactac 1800  
 ctttttgttc cccattcctt aattgtattg ttttccaag tgtaattatc 1850  
 atgcgtttta tatcttccta ataagggtg tgctgtttgt ctgaacaaag 1900  
 tgctagactt tctggagtg taatctgggt acaaatattc tctctgtagc 1950  
 tgtaagcaag tcacttaatc tttctacctc tttttctat ctgccaaatt 2000  
 gagataatga tacttaacca gttagaagag gtagtgtgaa tattaattag 2050  
 tttatattac tcttattctt tgaacatgaa ctatgcctat gtagtgtctt 2100  
 tatttgctca gctggctgag aactgaaga agtcactgaa caaacctac 2150  
 acacgtacct tcatgtgatt cactgccttc ctctctctac cagtctattt 2200  
 ccactgaaca aaacctacac acataccttc atgtggttca gtgccttcct 2250  
 ctctctacca gtctatttcc actgaacaaa acctacgcac ataccttcat 2300  
 gtggtcagct gccttcctct ctctaccagt ctatttccat tctttcagct 2350  
 gtgtctgaca tgtttggtct ctgttccatt ttaacaactg ctcttacttt 2400  
 tccagtctgt acagaatgct atttcacttg agcaagatga tgtaatggaa 2450  
 aggggtgttg cactgggtgc tggagacctg gatttgagtc ttgggtgctat 2500  
 caatcacctg ctgtgtttga gcaaggcatt tggctgctgt aagcttattg 2550  
 cttcatctgt aagcgggtgt ttgtaattcc tgatcttccc acctcacagt 2600  
 gatgttggtg ggatccagtg agatagaata catgtaagtg tggttttgta 2650  
 atttaaaaag tgctatacta agggaaagaa ttgaggaatt aactgcatac 2700  
 gttttggtgt tgcttttcaa atgtttgaaa ataaaaaaaaa tgttaag 2747

<210> 270

<211> 211

<212> PRT

<213> Homo sapiens

<400> 270

Met	Ala	Asn	Ala	Gly	Leu	Gln	Leu	Leu	Gly	Phe	Ile	Leu	Ala	Phe
1				5					10					15

Leu Gly Trp Ile Gly Ala Ile Val Ser Thr Ala Leu Pro Gln Trp

20										25					30				
Arg	Ile	Tyr	Ser	Tyr	Ala	Gly	Asp	Asn	Ile	Val	Thr	Ala	Gln	Ala					
				35					40					45					
Met	Tyr	Glu	Gly	Leu	Trp	Met	Ser	Cys	Val	Ser	Gln	Ser	Thr	Gly					
				50					55					60					
Gln	Ile	Gln	Cys	Lys	Val	Phe	Asp	Ser	Leu	Leu	Asn	Leu	Ser	Ser					
				65					70					75					
Thr	Leu	Gln	Ala	Thr	Arg	Ala	Leu	Met	Val	Val	Gly	Ile	Leu	Leu					
				80					85					90					
Gly	Val	Ile	Ala	Ile	Phe	Val	Ala	Thr	Val	Gly	Met	Lys	Cys	Met					
				95					100					105					
Lys	Cys	Leu	Glu	Asp	Asp	Glu	Val	Gln	Lys	Met	Arg	Met	Ala	Val					
				110					115					120					
Ile	Gly	Gly	Ala	Ile	Phe	Leu	Leu	Ala	Gly	Leu	Ala	Ile	Leu	Val					
				125					130					135					
Ala	Thr	Ala	Trp	Tyr	Gly	Asn	Arg	Ile	Val	Gln	Glu	Phe	Tyr	Asp					
				140					145					150					
Pro	Met	Thr	Pro	Val	Asn	Ala	Arg	Tyr	Glu	Phe	Gly	Gln	Ala	Leu					
				155					160					165					
Phe	Thr	Gly	Trp	Ala	Ala	Ala	Ser	Leu	Cys	Leu	Leu	Gly	Gly	Ala					
				170					175					180					
Leu	Leu	Cys	Cys	Ser	Cys	Pro	Arg	Lys	Thr	Thr	Ser	Tyr	Pro	Thr					
				185					190					195					
Pro	Arg	Pro	Tyr	Pro	Lys	Pro	Ala	Pro	Ser	Ser	Gly	Lys	Asp	Tyr					
				200					205					210					

Val

<210> 271  
 <211> 564  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> unsure  
 <222> 21, 69, 163, 434, 436, 444  
 <223> unknown base

<400> 271  
 ttctggccaa acccggggct ncagctgttg ggcttcattc cgccttcttg 50  
 ggatggatcg ggcctatcnt cacactgccc ttccccagtg gaggatttta 100  
 ctccctatgc tggcgacaac atcgtgaccg cccagcccat gtacgagggg 150

ctgtggatgt ccngcgtgtc gcagagcacc gggcagatcc agtgcaaagt 200  
 ctttgactcc ttgctgaatc tgagcagcac attgcaagca acccgtgcct 250  
 tgatgggtgtg tggcaccctc ctgggagtga tagcaatctt tgtggccacc 300  
 gttggcatga agtgtatgaa gtgcttgga gacgatgagg tgcagaagat 350  
 gaggatggct gtcattgggg gcgcgatatt tcttcttgca ggtctggcta 400  
 ttttagttgc cacagcatgg tatggcaata gaancnttca acanttctat 450  
 gaccctatga cccagtcaa tgccaggta gaatttggc aggtctctct 500  
 cactggctgg gctgctgctt ctctctgcct tctgggaggt gccctacttt 550  
 gctgttcctg tccc 564

<210> 272

<211> 498

<212> DNA

<213> Homo sapiens

<220>

<221> unsure

<222> 30, 49, 102, 141, 147, 171, 324-325, 339-341

<223> unknown base

<400> 272

acccttgacc caacgcgggc ccccgaccgn ttcattggcca aacgcgggnc 50  
 tccagctgtt gggcttcatt ctccccttcc tgggatggac cggcgcccat 100  
 cntcagcact gccctgcccc agtggaggat ttactcctat nccggcnaca 150  
 acatcgtgac cgcccaggcc ntgtacgagg ggctgtggat gtcttgctg 200  
 tcgcagagca ccgggcagat ccagtgcaaa gtctttgact cccttgctga 250  
 atctgagcag cacattgcaa gcaaccctg ccttgatggg ggttggcatc 300  
 ctctggggag tgatagcaat cttnttggcc accgttgtnn ntgaagtgt 350  
 tgaagtgctt ggaagacgat gaggtgcaga agatgaggat ggctgtcatt 400  
 gggggcgcca tatttcttct tgcaggtctg gctattttag ttgccacagc 450  
 atggtatggc aatagaatcg ttcaagaatt ctatgaccct atgaccga 498

<210> 273

<211> 552

<212> DNA

<213> Homo sapiens

<220>

<221> unsure

<222> 25, 57, 67, 94-95, 116, 152, 165, 212, 233, 392-394

<223> unknown base

<400> 273

gggcccgacc attatccaac cgggntcact gttggctcat ctccctcctg 50  
gatgaancgc gccatcntca gactccctgc cccatggaga tttnnccctat 100  
gctggcgaca acatcntgac ccccagccat gtacgagggg ctttgaacgt 150  
cngcgtgtcg cagancaccg ggcagatcca gtgcaaagtc tttgactcct 200  
tgctgaatct gngcagcaca ttgcagcaac cntgcccctg atgggtggtg 250  
gcacccctcct gggagtgata gcaatctttg tggccaccgt tggcatgaag 300  
tgtatgaagt gcttgaaga cgatgaggtg cagaagatga ggatggctgt 350  
cattgggggc gcgatatttc ttcttgagcagg tctggctatt tnnngttgcc 400  
acagcatggt atggcaatag aatcgttcaa gaattctatg accctatgac 450  
cccagtcaat gccaggtagc aatttggtca ggctctcttc actggctggg 500  
ctgctgcttc tctctgcctt ctgggaggtg ccctactttg ctgttcctgc 550  
ga 552

<210> 274

<211> 526

<212> DNA

<213> Homo sapiens

<220>

<221> unsure

<222> 25, 50, 60, 123, 127, 370, 395, 397-398, 402-403, 405-407

<223> unknown base

<400> 274

attctcccct cctggatgga tgcncacc gtcacattgc cttccccan 50  
tggaggattn actcctatgc tggcgacaac atcgtgaccc ccagggccat 100  
ttaccgaggg gctttggatg tcntgcntgt cgcagagcac cgggcagatc 150  
ccagtgcaaa gtctttgact ccttgctgaa tctgagcagc acattgcaag 200  
caaccctgct cttgatgggg ttggcctcct cctgggagtg atagcaacct 250  
ttgtggccac cgttggcatg aagtgtatga agtgcttga agacgatgag 300  
gtgccagaag atgaggatgg ctgtcattgg gggcgcgata tttcttgttg 350  
caggtctggc tatttttagtn gccacagcat ggtatggcaa tagantnntt 400  
cnnnnntct atgaccctat gacccagtc aatgccaggt acgaatttgg 450

tcaggtctctc ttcactgggt gggctgctgc ttctctctgc cttctgggag 500  
gtgccctact ttgctgttcc tgtccc 526

<210> 275

<211> 398

<212> DNA

<213> Homo sapiens

<220>

<221> unsure

<222> 22, 61, 91, 144, 238-239, 262, 265-266, 271, 274

<223> unknown base

<400> 275

agagcaccgg cagatcccag tncaaagtct ttgacccttg ctgaatctga 50  
gcagcacatt ncaagcaacc ccttgccctg aagggtggtg ncatcccccc 100  
tgaggagtga tagcaatctt tgtggccacc gtggcatga agtntatgaa 150  
gtgcttgga gacgatgagg tgcagaagat gaggatggct gtcattgggg 200  
gcgcgatatt tcttcttgca ggtctggcta ttttagtnnc cacagcatgg 250  
tatggcaata gnatnnttcg nggnttctat gaccctatga cccagtcaa 300  
tgccaggtag gaatttggtc aggctctctt cactggctgg gctgctgctt 350  
ctctctgcct tctgggaggt gccctacttt gctgttctctg tccccgaa 398

<210> 276

<211> 495

<212> DNA

<213> Homo sapiens

<220>

<221> unsure

<222> 39, 58, 130, 234, 314, 364, 427, 450, 461, 476

<223> unknown base

<400> 276

agcaatgccc tgccccagt ggaggattaa ttcctatgnt ggggacaaca 50  
ttgtgacngc ccaggccatg tacggggggc tgtggatgtc ctgcgtgtcg 100  
cagagcaccg ggcagatcca gtgcaaagtn tttgactcct tgetgaattt 150  
gagcagcaca ttgcaagcaa cccgtgcctt gatgggtggtt ggcattcttc 200  
tgaggagtgat agcaatcttt gtggccaccg tggnaatgaa gtgtatgaag 250  
tgcttggaag acgatgaggt gcagaagatg aggatggctg tcattggggg 300  
cgcgatattt cttnttgca gctctggctat tttagttgcc acagcatggt 350  
atggcaatag aatngttcaa gaattttatg accctatgac cccagtcaat 400

gccaggtacg aatttgggtca ggctttnttc actggctggg ctgctgcttn 450

tttctgcctt ntgggaggtg ccctantttg ctgttcctgc gaacc 495

<210> 277

<211> 200

<212> DNA

<213> Homo sapiens

<220>

<221> unsure

<222> 34, 87, 138, 147, 163, 165-166, 172

<223> unknown base

<400> 277

tcataggggg gcgcgatatt ttttcttgca ggtntgggta ttttagttgc 50

cacagcatgg tatggcaata gaatcggtca agaattntat gaccctatga 100

ccccagtcaa tgccaggtac gaatttgggc aggcctctntt cactggntgg 150

gctgctgctt ctntnngcct tntgggaggt gccctacttt gctgttcctg 200

<210> 278

<211> 542

<212> DNA

<213> Homo sapiens

<220>

<221> unsure

<222> 26, 43, 55, 77, 198, 361-362, 391-392, 396

<223> unknown base

<400> 278

ttcctgggat ggatccgccc ccattntcac atgccctgcc ccttgagat 50

ttacncctat gctggcgaac aacatntga ccgccaggc catgtacgag 100

gggctgtgga atgtcctgcg tgtcccagag caccgggcag atccagtgc 150

aagtctttga ctcttgctg aatctgagca gcacattgca agcaacntg 200

ccttgatggt ggttggcatc ctctgggag tgatagcaat ctttgtggcc 250

accgttggca tgaaagtgtg tgaagtgtt ggaagacgat gaggtgcaga 300

agatgaggat ggctgtcatt gggggcgaga tatttcttct tgcaggctctg 350

gctatttttag nngccacagc atggtatggc aatcagaccc nntcanaaac 400

tctatgaccc tatgacccca gtcaatgccg ggtacgaatt tggtcaggct 450

ctcttactg gctgggctgc tgccttctct tgccttctg gaggtgcct 500

actttgctgt tcctgtcccc gaaaaacaac ctcttaccca cg 542

<210> 279  
<211> 548  
<212> DNA  
<213> Homo sapiens

<220>  
<221> unsure  
<222> 90, 115, 147, 228, 387  
<223> unknown base

<400> 279  
cggggctgca gctgttgggc ttcattctgc ttcctgggat ggaatcggcg 50  
ccatcgtcag cactgccctg ccccatggag gatttactcn tatgctggcg 100  
acaacatcgt gaccnccag gccatgtacg aggggctgtg gatgtcngcg 150  
tgtcgcagag caccgggcag atccagtgc aagtctttga ctcttgctg 200  
aatctgagca gcacattgca agcaaccntg ccttgatggg ggttggcatc 250  
ctcctgggag tgatagcaat ctttgtggcc accgttggca tgaagtgtat 300  
gaagtgcctg gaagacgatg aggtgcagaa gatgaggatg gctgtcattg 350  
ggggcgcgat atttcttctt gcaggtctgg ctatttntag ttgccacagc 400  
atggtatggc aatagaatcg ttcaagaatt ctatgaccct atgacccag 450  
tcaatgccag gtacgaattt ggtcaggctc tcttactgg ctgggctgct 500  
gcttctctct gccttctggg aggtgcccta ctttgcgtgt cctgcgaa 548

<210> 280  
<211> 21  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 280  
cgagcgagtc atggccaacg c 21

<210> 281  
<211> 26  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 281  
gtgtcacacg tagtctttcc cgctgg 26

<210> 282  
<211> 43



<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 282

ctgcagctgt tgggcttcat tctgccttc ctgggatgga tcg 43

<210> 283

<211> 2285

<212> DNA

<213> Homo sapiens

<400> 283

gcgtgccgtc agctcgccgg gcaccgggc ctgccctcg cctccgccc 50  
ctgcgcctgc accgcgtaga ccgaccccc cctccagcgc gccacccgg 100  
tagaggaccc ccgccgtgc ccgaccggg cccgccttt ttgtaaaact 150  
taaagcgggc gcagcattaa cgcttccgc cccggtgacc tctcaggggt 200  
ctccccgcca aaggtgctcc gccgctaagg aacatggcga aggtggagca 250  
ggtcctgagc ctcgagccgc agcacgagct caaattccga ggtcccttca 300  
ccgatgttgt caccaccaac ctaaagcttg gcaaccgac agaccgaaat 350  
gtgtgtttta aggtgaagac tacagacca cgtaggtact gtgtgaggcc 400  
caacagcgga atcatcgatg caggggcctc aattaatgta tctgtgatgt 450  
tacagccttt cgattatgat cccaatgaga aaagtaaaca caagtttatg 500  
gttcagtcta tgtttgctcc aactgacact tcagatatgg aagcagtatg 550  
gaaggaggca aaaccggaag accttatgga ttcaaaactt agatgtgtgt 600  
ttgaattgcc agcagagaat gataaaccac atgatgtaga aataaataaa 650  
attatatcca caactgcac aaagacagaa acaccaatag tgtctaagtc 700  
tctgagttct tctttggatg acaccgaagt taagaagggt atggaagaat 750  
gtaagaggct gcaaggtgaa gttcagaggc tacgggagga gaacaagcag 800  
ttcaaggaag aagatggact gcgcatgagg aagacagtgc agagcaacag 850  
ccccatttca gcattagccc caactgggaa ggaagaaggc cttagcacc 900  
ggctcttggc tctggtggtt ttgttcttta tcgttggtgt aattattggg 950  
aagattgcct tgtagaggta gcatgcacag gatggtaaata tggattggtg 1000  
gatccaccat atcatgggat ttaaatttat cataaccatg tgtaaaaaga 1050

aattaatgta tgatgacatc tcacaggtct tgcctttaaa ttacccctcc 1100  
ctgcacacac atacacagat acacacacac aaatataatg taacgatctt 1150  
ttagaaagtt aaaaatgtat agtaactgat tgagggggaa aaagaatgat 1200  
ctttattaat gacaaggga accatgagta atgccacaat ggcataattgt 1250  
aaatgtcatt ttaaacattg gtaggccttg gtacatgatg ctggattacc 1300  
tctcttaaaa tgacaccctt cctcgcctgt tgggtgctggc ccttggggag 1350  
ctggaggcca gcatgctggg gagtgcggtc agctccacac agtagtcccc 1400  
acgtggcca ctcccgccc aggctgcttt ccgtgtcttc agttctgtcc 1450  
aagccatcag ctcttgga ctgatgaaca gagtcagaag cccaaaggaa 1500  
ttgcaactgtg gcagcatcag acgtactcgt cataagttag aggcgtgtgt 1550  
tgactgattg acccagcgt ttggaataa atggcagtgc tttgttact 1600  
taaagggacc aagctaaatt tgtattggtt catgtagtga agtcaaactg 1650  
ttattcagag atgtttaatg catatttaac ttatttaatg tatttcact 1700  
catgttttct tattgtcaca agagtacagt taatgctgctg tgctgctgaa 1750  
ctctgttggg tgaactgta ttgctgctgg agggctgtgg gctcctctgt 1800  
ctctggagag tctggcatg tggaggtggg gtttattggg atgctggaga 1850  
agagctgcca ggaagtgtt tttctgggtc agtaaataac aactgtcata 1900  
gggagggaaa ttctcagtag tgacagtcaa ctctagggtta ccttttttaa 1950  
tgaagagtag tcagtcttct agattgttct tataccacct ctcaaccatt 2000  
actcacactt ccagcgcca ggtccaagtc tgagcctgac ctccccttg 2050  
ggacctagcc tggagtcagg acaaatggat cgggctgcag agggtagaa 2100  
gcgagggcac cagcagttgt ggggtggggag caagggaaga gagaaactct 2150  
tcagcgaatc cttctagtac tagttgagag ttgactgtg aattaatttt 2200  
atgccataaa agaccaaccc agttctgttt gactatgtag catcttgaaa 2250  
agaaaaatta taataaagcc ccaaaattaa gaaaa 2285

<210> 284

<211> 243

<212> PRT

<213> Homo sapiens

<400> 284

Met Ala Lys Val Glu Gln Val Leu Ser Leu Glu Pro Gln His Glu

1	5	10	15
Leu Lys Phe Arg Gly	Pro Phe Thr Asp Val	Val Thr Thr Asn Leu	
	20	25	30
Lys Leu Gly Asn Pro	Thr Asp Arg Asn Val	Cys Phe Lys Val Lys	
	35	40	45
Thr Thr Ala Pro Arg	Arg Tyr Cys Val Arg	Pro Asn Ser Gly Ile	
	50	55	60
Ile Asp Ala Gly Ala	Ser Ile Asn Val Ser	Val Met Leu Gln Pro	
	65	70	75
Phe Asp Tyr Asp Pro	Asn Glu Lys Ser Lys	His Lys Phe Met Val	
	80	85	90
Gln Ser Met Phe Ala	Pro Thr Asp Thr Ser	Asp Met Glu Ala Val	
	95	100	105
Trp Lys Glu Ala Lys	Pro Glu Asp Leu Met	Asp Ser Lys Leu Arg	
	110	115	120
Cys Val Phe Glu Leu	Pro Ala Glu Asn Asp	Lys Pro His Asp Val	
	125	130	135
Glu Ile Asn Lys Ile	Ile Ser Thr Thr Ala	Ser Lys Thr Glu Thr	
	140	145	150
Pro Ile Val Ser Lys	Ser Leu Ser Ser Ser	Leu Asp Asp Thr Glu	
	155	160	165
Val Lys Lys Val Met	Glu Glu Cys Lys Arg	Leu Gln Gly Glu Val	
	170	175	180
Gln Arg Leu Arg Glu	Glu Asn Lys Gln Phe	Lys Glu Glu Asp Gly	
	185	190	195
Leu Arg Met Arg Lys	Thr Val Gln Ser Asn	Ser Pro Ile Ser Ala	
	200	205	210
Leu Ala Pro Thr Gly	Lys Glu Glu Gly Leu	Ser Thr Arg Leu Leu	
	215	220	225
Ala Leu Val Val Leu	Phe Phe Ile Val Gly	Val Ile Ile Gly Lys	
	230	235	240

Ile Ala Leu

<210> 285

<211> 418

<212> DNA

<213> Homo sapiens

<220>

<221> unsure

<222> 40, 53, 68, 119, 134, 177-178, 255

<223> unknown base

<400> 285

gtcagtccttc tagattgtcc ttatcccacc tttcaaccan tactcacatt 50  
tcnagcgccc aggtccangt ctgagcctga cttccccttg gggacctagc 100  
ctggagtcag gacaatggnt cgggctgcag aggnntagaa gcgagggcac 150  
cagcagtttt ggggtggggag caagggngga gagaaactct tcagcgaatc 200  
cttctagtag tagttgagag ttgactgtg aattaatttt atgccataaa 250  
agacnaaccc agttctgttt gactatgtag catcttgaaa agaaaaatta 300  
taataaagcc ccaaaattaa gaattctttt gtcattttgt cacatttgct 350  
ctatgggggg aattattatt ttatcatttt tattattttg ccattggaag 400  
gttaacttta aaatgagc 418

<210> 286

<211> 543

<212> DNA

<213> Homo sapiens

<220>

<221> unsure

<222> 73, 97

<223> unknown base

<400> 286

tattgtaaag gccattttaa accattggta ggccttggtg catgatgctg 50  
gattacctcc ttaaatgaca cnttcctcg cctggttggtg ctggccnttg 100  
gggagctgga gccccagcat gctggggagt gcggtcagct ccacacagta 150  
gtccccacgt ggccactcc cggcccaggc tgctttccgt gtcttcagtt 200  
ctgtccaagc catcagctcc ttgggactga tgaacagagt cagaagccca 250  
aaggaattgc cactgtggca gcatcagacg tactcgtcat aagtgagagg 300  
cgtgtgttga ctgattgacc cagcgctttg gaaataaatg gcagtgcctt 350  
gttcacttaa agggaccaag ctaaattgta ttgggtcatg tagtgaagtc 400  
aaactgttat tcagagatgt ttaatgcata tttaacttat ttaatgtatt 450  
tcattctatg ttttcttatt gtcacaagag tacagttaat gctgcgtgct 500  
gctgaactct gttgggtgaa ctggtattgc tgctggaggg ctg 543

<210> 287

<211> 270

<212> DNA

<213> Homo sapiens

<220>

<221> unsure

<222> 38, 64, 72, 164, 198, 200, 220, 222, 229, 242

<223> unknown base

<400> 287

ccctgggtggt tttgttcttt aattcggttg tgtaattntt gggaagattg 50  
ctttagtagagg tagnatgcac cnggctggta aattggattg gtggatccac 100  
catatccatg ggatttaaata ttatcataac catgtgtaaa aagaaattaa 150  
tgtatgatga catntcacag gtattgcctt taaattaccc atccctgnan 200  
acacatacac agatacacan anacaaatnt aatgtaacga tnttttagaa 250  
agttaaaaaat gtatagtaac 270

<210> 288

<211> 428

<212> DNA

<213> Homo sapiens

<220>

<221> unsure

<222> 35, 116, 129, 197, 278, 294, 297, 349, 351

<223> unknown base

<400> 288

ggtggcccat tcccgccca ggctgctttc cggntttcag ttctgtccaa 50  
gccatcagct ccttgggact gatgaacaga gtcagaagcc caaaggaatt 100  
gcaactgtggc agcatnagac gtacttgtna taagtgagag gcgtgtgttg 150  
actgattgac ccagcgtttt ggaaataaat ggcagtgcctt tgttcantta 200  
aagggaccaa gctaaatttg tattgggttca tgtagtgaag tcaaactgtt 250  
attcagagat gtttaatgca tatttaantt atttaatgta tttnatntca 300  
tgttttctta ttgtcacaag agtacagtta atgctgcgtg ctgctgaant 350  
ntgttgggtg aactggtatt gctgctggag ggctgtgggc tcctctgtct 400  
ttggagagtc tggcatgtg gaggtggg 428

<210> 289

<211> 320

<212> DNA

<213> Homo sapiens

<400> 289

tgctttccgt gtcttcagtt ctgtccaagc catcagctcc ttgggacttg 50

atgaacagag tcagaagccc aaaggaattg cactgtggca gcatcagacg 100  
tactcgtcat aagtgagagg cgtgtgttga ctgattgacc cagcgctttg 150  
gaaataaatg gcagtgcctt gtacacttaa agggaccaag ctaaatttgt 200  
attggttcat gtagtgaagt caaactgtta ttcagagatg tttaatgcat 250  
atttaactta tttaatgtat ttcactcat gttttcttat tgtcacaaga 300  
gtacagttaa tgctgcgtgc 320

<210> 290

<211> 609

<212> DNA

<213> Homo sapiens

<220>

<221> unsure

<222> 57, 60, 186, 235, 244, 304, 339, 355, 359, 361, 387, 432, 441,  
447, 481, 513, 532, 584, 598

<223> unknown base

<400> 290

aaacctttaa aagttgaggg gaaaagaatg atcctttatt aatgacaagg 50  
gaaacntgn gtaatgccac aatggcatat tgtaaatgtc attttaaaca 100  
ttggtaggcc ttggtacatg atgctggatt acctctctta aaatgacacc 150  
cttcctcgcc tgttggtgct ggcccttggg gagctngage ccagcatgct 200  
ggggagtgcg gtctgctcca cacagtagtc cccangtggc ccantcccg 250  
cccaggctgc tttccgtgct ttcagttctg tccaagccat cagctccttg 300  
ggantgatga acagagtcag aagcccaaag gaattgcant gtggcagcat 350  
cagangtant ngtcataagt gagaggcgtg tgttgantga ttgaccagc 400  
gctttggaaa taaatggcag tgctttgttc anttaaaggg nccaagntaa 450  
atgtgtattg gttcatgtag tgaagtcaaa ntgttattca gagatgttta 500  
atgcatatth aanttattta atgtatttca tntcatgttt tcttattgtc 550  
acaagggtac agttaatgct gcgtgctgct gaantctggt ggggtgaantg 600  
gtattgctg 609

<210> 291

<211> 493

<212> DNA

<213> Homo sapiens

<400> 291

ggcccttggg gagctggagc ccagcatgct ggggagtgcg gtcagctcca 50  
cacagtagtc cccacgtggc ccactcccgg cccaggctgc tttccgtgtc 100  
ttcagttctg tccaagccat cagctccttg ggactgatga acagagtcag 150  
aagcccaaag gaattgcact gtggcagcat cagacgtact cgtcataagt 200  
gagaggcgtg tgttgactga ttgaccagc gctttggaaa taaatggcag 250  
tgctttgttc acttaaaggg accaagctaa atttgtattg gttcatgtag 300  
tgaagtcaaa ctgttattca gagatgttta atgcatattt aacttattta 350  
atgtatttca tctcatgttt tcttattgtc acaagagtac agttaatgct 400  
gcgtgctgct gaactctgtt ggggtgaactg gtattgctgc tggagggctg 450  
tgggctcctc tgtctctgga gagtctggc atgtggaggt ggg 493

<210> 292

<211> 27

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 292

gcaccaccgt aggtacttgt gtgaggc 27

<210> 293

<211> 23

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 293

aaccaccaga gccaaagagc ggg 23

<210> 294

<211> 50

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 294

cagcggaatc atcgatgcag gggcctcaat taatgtatct gtgatgttac 50

<210> 295

<211> 2530

<212> DNA

<213> Homo sapiens

<400> 295

gcgagctccg ggtgctgtgg cccggccttg gcggggcggc ctccggctca 50  
ggctggctga gaggtccca gctgcagcgt ccccgccgc ctcccgga 100  
gctctgatct cagctgacag tgccctcggg gaccaaaca gcctggcagg 150  
gtctcacttt gttgccagg ctggagttca gtgccatgat catggtttac 200  
tgcagccttg acctcctggg ttcaagcgt cctgctgagt agctgggact 250  
acaggacaaa attagaagat caaaatggaa aatatgctgc tttggttgat 300  
atTTTTcacc cctgggtgga ccctcattga tggatctgaa atggaatggg 350  
atTTTatgtg gcacttgaga aaggtacccc ggattgtcag tgaaaggact 400  
ttccatctca ccagccccgc atttgaggca gatgctaaga tgatggtaaa 450  
tacagtgtgt ggcacgaat gccagaaaga actcccaact ccagccttt 500  
ctgaattgga ggattatctt tcctatgaga ctgtctttga gaatggcacc 550  
cgaaccttaa ccagggtgaa agttcaagat ttggttcttg agccgactca 600  
aaatatcacc acaaaggag tatctgttag gagaaagaga cagggtgatg 650  
gcaccgacag cagggtcagc atcttgagca aaagggttctt aaccaatttc 700  
cctttcagca cagctgtgaa gctttccacg ggctgtagtg gcattctcat 750  
ttccccctcag catgttctaa ctgctgcca ctgtgttcat gatggaaagg 800  
actatgtcaa agggagtaaa aagctaaggg taggggtgtt gaagatgagg 850  
aataaaagtg gaggaagaa acgtcgaggt tctaagagga gcaggagaga 900  
agctagtggg ggtgaccaa gagagggtac cagagagcat ctgcaggaga 950  
gagcgaaggg tgggagaaga agaaaaaat ctggccggg tcagaggatt 1000  
gccgaaggga ggccttcctt tcagtggacc cgggtcaaga ataccacat 1050  
tccgaagggc tgggcacgag gaggcattgg ggacgtacc ttggactatg 1100  
actatgctct tctggagctg aagcgtgctc aaaaaagaa atacatgaa 1150  
cttggaatca gcccaacgat caagaaaatg cctggtggaa tgatccactt 1200  
ctcaggattt gataacgata gggctgatca gttggtctat cggttttgca 1250  
gtgtgtccga cgaatccaat gatctccttt accaatactg cgatgctgag 1300  
tcgggctcca ccggttcggg ggtctatctg cgtctgaaag atccagacaa 1350  
aaagaattgg aagcgcaaaa tcattgcggt ctactcaggg caccagtggg 1400



tggatgtcca cggggttcag aaggactaca acgttgctgt tcgcatcact 1450  
 cccctaaaat acgcccagat ttgcctctgg attcacggga acgatgcaa 1500  
 ttgtgcttac ggctaacaga gacctgaaac agggcggtgt atcatctaaa 1550  
 tcacagagaa aaccagctct gcttaccgta gtgagatcac ttcataagggt 1600  
 atgcctggac ttgaactctg tcaatagcat ttcaacattt ttcaaaatca 1650  
 ggagattttc gtccatttaa aaaatgtata ggtgcagata ttgaaactag 1700  
 gtgggcactt caatgccaaag tatatactct tctttacatg gtgatgagtt 1750  
 tcattttagt aaaaattttg ttgccttctt aaaaattaga cacacttta 1800  
 accttcaaac aggtattata aataacatgt gactccttaa tggacttatt 1850  
 ctcagggtcc tactctaaga agaatctaag aggatgctgg ttgtgtatta 1900  
 aatgtgaaat tgcataagata aaggtagatg gtaaagcaat tagtatcaga 1950  
 atagagacag aaagttacaa cacagtttgt actactctga gatggatcca 2000  
 ttcagctcat gccctcaatg tttatattgt gttatctggt gggctctggga 2050  
 catttagttt agtttttttg aagaattaca aatcagaaga aaaagcaagc 2100  
 attataaaca aaactaataa ctgttttact gctttaagaa ataacaatta 2150  
 caatgtgtat tatttaaaaa tgggagaaat agtttgttct atgaaataaa 2200  
 cctagtttag aaatagggaa gctgagacat ttttaagatct caagttttta 2250  
 ttttaactaat actcaaaata tggacttttc atgtatgcat aggggaagaca 2300  
 cttcacaaat tatgaatgat catgtgttga aagccacatt attttatgct 2350  
 atacattcta tgtatgaggt gctacatttt taggacaaag aattctgtaa 2400  
 tctttttcaa gaaagagtct ttttctcctt gacaaaatcc agcttttgta 2450  
 tgaggactat aggggtgaatt ctctgattag taattttaga tatgtccttt 2500  
 cctaaaaatg aataaaattt atgaatatga 2530

<210> 296

<211> 413

<212> PRT

<213> Homo sapiens

<400> 296

Met	Glu	Asn	Met	Leu	Leu	Trp	Leu	Ile	Phe	Phe	Thr	Pro	Gly	Trp
1				5				10					15	

Thr Leu Ile Asp Gly Ser Glu Met Glu Trp Asp Phe Met Trp His

20					25					30				
Leu	Arg	Lys	Val	Pro	Arg	Ile	Val	Ser	Glu	Arg	Thr	Phe	His	Leu
				35					40					45
Thr	Ser	Pro	Ala	Phe	Glu	Ala	Asp	Ala	Lys	Met	Met	Val	Asn	Thr
				50					55					60
Val	Cys	Gly	Ile	Glu	Cys	Gln	Lys	Glu	Leu	Pro	Thr	Pro	Ser	Leu
				65					70					75
Ser	Glu	Leu	Glu	Asp	Tyr	Leu	Ser	Tyr	Glu	Thr	Val	Phe	Glu	Asn
				80					85					90
Gly	Thr	Arg	Thr	Leu	Thr	Arg	Val	Lys	Val	Gln	Asp	Leu	Val	Leu
				95					100					105
Glu	Pro	Thr	Gln	Asn	Ile	Thr	Thr	Lys	Gly	Val	Ser	Val	Arg	Arg
				110					115					120
Lys	Arg	Gln	Val	Tyr	Gly	Thr	Asp	Ser	Arg	Phe	Ser	Ile	Leu	Asp
				125					130					135
Lys	Arg	Phe	Leu	Thr	Asn	Phe	Pro	Phe	Ser	Thr	Ala	Val	Lys	Leu
				140					145					150
Ser	Thr	Gly	Cys	Ser	Gly	Ile	Leu	Ile	Ser	Pro	Gln	His	Val	Leu
				155					160					165
Thr	Ala	Ala	His	Cys	Val	His	Asp	Gly	Lys	Asp	Tyr	Val	Lys	Gly
				170					175					180
Ser	Lys	Lys	Leu	Arg	Val	Gly	Leu	Leu	Lys	Met	Arg	Asn	Lys	Ser
				185					190					195
Gly	Gly	Lys	Lys	Arg	Arg	Gly	Ser	Lys	Arg	Ser	Arg	Arg	Glu	Ala
				200					205					210
Ser	Gly	Gly	Asp	Gln	Arg	Glu	Gly	Thr	Arg	Glu	His	Leu	Gln	Glu
				215					220					225
Arg	Ala	Lys	Gly	Gly	Arg	Arg	Arg	Lys	Lys	Ser	Gly	Arg	Gly	Gln
				230					235					240
Arg	Ile	Ala	Glu	Gly	Arg	Pro	Ser	Phe	Gln	Trp	Thr	Arg	Val	Lys
				245					250					255
Asn	Thr	His	Ile	Pro	Lys	Gly	Trp	Ala	Arg	Gly	Gly	Met	Gly	Asp
				260					265					270
Ala	Thr	Leu	Asp	Tyr	Asp	Tyr	Ala	Leu	Leu	Glu	Leu	Lys	Arg	Ala
				275					280					285
His	Lys	Lys	Lys	Tyr	Met	Glu	Leu	Gly	Ile	Ser	Pro	Thr	Ile	Lys
				290					295					300
Lys	Met	Pro	Gly	Gly	Met	Ile	His	Phe	Ser	Gly	Phe	Asp	Asn	Asp

305	310	315
Arg Ala Asp Gln Leu Val Tyr Arg Phe Cys Ser Val Ser Asp Glu		
320	325	330
Ser Asn Asp Leu Leu Tyr Gln Tyr Cys Asp Ala Glu Ser Gly Ser		
335	340	345
Thr Gly Ser Gly Val Tyr Leu Arg Leu Lys Asp Pro Asp Lys Lys		
350	355	360
Asn Trp Lys Arg Lys Ile Ile Ala Val Tyr Ser Gly His Gln Trp		
365	370	375
Val Asp Val His Gly Val Gln Lys Asp Tyr Asn Val Ala Val Arg		
380	385	390
Ile Thr Pro Leu Lys Tyr Ala Gln Ile Cys Leu Trp Ile His Gly		
395	400	405
Asn Asp Ala Asn Cys Ala Tyr Gly		
410		

<210> 297

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 297

gcatctgcag gagagagcga aggg 24

<210> 298

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 298

catcggtccc gtgaatccag aggc 24

<210> 299

<211> 45

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 299

gaagggaggc cttcctttca gtggacccgg gtcaagaata cccac 45

<210> 300

<211> 1869

<212> DNA

<213> Homo sapiens

<400> 300

aatgtgagag gggctgatgg aagctgatag gcaggactgg agtgtttagca 50  
ccagtactgg atgtgacagc aggcagagga gcacttagca gcttattcag 100  
tgtccgattc tgattccggc aaggatccaa gcatggaatg ctgccgtcgg 150  
gcaactcctg gcacactgct cctctttctg gctttcctgc tcctgagttc 200  
caggaccgca cgctccgagg aggaccggga cggcctatgg gatgcctggg 250  
gcccatggag tgaatgctca cgcacctgcg ggggaggggc ctccactct 300  
ctgaggcgct gcctgagcag caagagctgt gaaggaagaa atatccgata 350  
cagaacatgc agtaatgtgg actgcccacc agaagcaggt gatttccgag 400  
ctcagcaatg ctcagctcat aatgatgtca agcaccatgg ccagttttat 450  
gaatggcttc ctgtgtctaa tgaccctgac aacccatgtt cactcaagtg 500  
ccaagccaaa ggaacaaccc tggttgttga actagcacct aaggtcttag 550  
atggtacgcy ttgctataca gaatctttgg atatgtgcat cagtggttta 600  
tgccaaattg ttggtgcga tcaccagctg ggaagcaccg tcaaggaaga 650  
taactgtggg gtctgcaacg gagatgggtc cacctgcggg ctgggtccgag 700  
ggcagtataa atcccagctc tccgcaacca aatcggatga tactgtggtt 750  
gcacttccct atggaagtag acatattcgc cttgtcttaa aaggtcctga 800  
tcacttatat ctggaaacca aaaccctcca ggggactaaa ggtgaaaaca 850  
gtctcagctc cacaggaact ttccttgtgg acaattctag tgtggacttc 900  
cagaaatttc cagacaaaga gatactgaga atggctggac cactcacagc 950  
agatttcatt gtcaagattc gtaactcggg ctccgctgac agtacagtcc 1000  
agttcatctt ctatcaaccc atcatccacc gatggaggga gacggatttc 1050  
tttccttgct cagcaacctg tggaggaggt tatcagctga catcggctga 1100  
gtgctacgat ctgaggagca accgtgtggt tgctgaccaa tactgtcact 1150  
attaccaga gaacatcaaa cccaaacca agcttcagga gtgcaacttg 1200  
gatccttgct cagccagtga cggatacaag cagatcatgc cttatgacct 1250  
ctaccatccc cttcctcggg gggaggccac cccatggacc gcgtgctcct 1300

cctcgtgtgg ggggggcac cagagccggg cagtttcttg tgtggaggag 1350  
 gacatccagg ggcattgtac ttcagtggaa gaggggaaat gcatgtacac 1400  
 ccctaagatg cccatcgccg agccctgcaa cttttttgac tgccctaaat 1450  
 ggctggcaca ggagtgggtct ccgtgcacag tgacatgtgg ccagggcctc 1500  
 agataccgtg tggctctctg catcgaccat cgaggaatgc acacaggagg 1550  
 ctgtagccca aaaacaaagc cccacataaa agaggaatgc atcgtaccca 1600  
 ctccctgcta taaacccaaa gagaaacttc cagtcgaggg caagttgcc 1650  
 tggttcaaac aagctcaaga gctagaagaa ggagctgctg tgtcagagga 1700  
 gccctcgtaa gttgtaaaag cacagactgt tctatatattg aaactgtttt 1750  
 gtttaaagaa agcagtgtct cactggttgt agctttcatg ggttctgaac 1800  
 taagtgaat catctacca aagctttttg gctctcaaat taaagattga 1850  
 ttagtttcaa aaaaaaaaa 1869

<210> 301

<211> 525

<212> PRT

<213> Homo sapiens

<400> 301

Met	Glu	Cys	Cys	Arg	Arg	Ala	Thr	Pro	Gly	Thr	Leu	Leu	Leu	Phe
1				5					10					15
Leu	Ala	Phe	Leu	Leu	Leu	Ser	Ser	Arg	Thr	Ala	Arg	Ser	Glu	Glu
			20						25					30
Asp	Arg	Asp	Gly	Leu	Trp	Asp	Ala	Trp	Gly	Pro	Trp	Ser	Glu	Cys
			35						40					45
Ser	Arg	Thr	Cys	Gly	Gly	Gly	Ala	Ser	Tyr	Ser	Leu	Arg	Arg	Cys
			50						55					60
Leu	Ser	Ser	Lys	Ser	Cys	Glu	Gly	Arg	Asn	Ile	Arg	Tyr	Arg	Thr
			65						70					75
Cys	Ser	Asn	Val	Asp	Cys	Pro	Pro	Glu	Ala	Gly	Asp	Phe	Arg	Ala
			80						85					90
Gln	Gln	Cys	Ser	Ala	His	Asn	Asp	Val	Lys	His	His	Gly	Gln	Phe
			95						100					105
Tyr	Glu	Trp	Leu	Pro	Val	Ser	Asn	Asp	Pro	Asp	Asn	Pro	Cys	Ser
			110						115					120
Leu	Lys	Cys	Gln	Ala	Lys	Gly	Thr	Thr	Leu	Val	Val	Glu	Leu	Ala
			125						130					135

Pro Lys Val Leu Asp Gly Thr Arg Cys Tyr Thr Glu Ser Leu Asp	140	145	150
Met Cys Ile Ser Gly Leu Cys Gln Ile Val Gly Cys Asp His Gln	155	160	165
Leu Gly Ser Thr Val Lys Glu Asp Asn Cys Gly Val Cys Asn Gly	170	175	180
Asp Gly Ser Thr Cys Arg Leu Val Arg Gly Gln Tyr Lys Ser Gln	185	190	195
Leu Ser Ala Thr Lys Ser Asp Asp Thr Val Val Ala Leu Pro Tyr	200	205	210
Gly Ser Arg His Ile Arg Leu Val Leu Lys Gly Pro Asp His Leu	215	220	225
Tyr Leu Glu Thr Lys Thr Leu Gln Gly Thr Lys Gly Glu Asn Ser	230	235	240
Leu Ser Ser Thr Gly Thr Phe Leu Val Asp Asn Ser Ser Val Asp	245	250	255
Phe Gln Lys Phe Pro Asp Lys Glu Ile Leu Arg Met Ala Gly Pro	260	265	270
Leu Thr Ala Asp Phe Ile Val Lys Ile Arg Asn Ser Gly Ser Ala	275	280	285
Asp Ser Thr Val Gln Phe Ile Phe Tyr Gln Pro Ile Ile His Arg	290	295	300
Trp Arg Glu Thr Asp Phe Phe Pro Cys Ser Ala Thr Cys Gly Gly	305	310	315
Gly Tyr Gln Leu Thr Ser Ala Glu Cys Tyr Asp Leu Arg Ser Asn	320	325	330
Arg Val Val Ala Asp Gln Tyr Cys His Tyr Tyr Pro Glu Asn Ile	335	340	345
Lys Pro Lys Pro Lys Leu Gln Glu Cys Asn Leu Asp Pro Cys Pro	350	355	360
Ala Ser Asp Gly Tyr Lys Gln Ile Met Pro Tyr Asp Leu Tyr His	365	370	375
Pro Leu Pro Arg Trp Glu Ala Thr Pro Trp Thr Ala Cys Ser Ser	380	385	390
Ser Cys Gly Gly Gly Ile Gln Ser Arg Ala Val Ser Cys Val Glu	395	400	405
Glu Asp Ile Gln Gly His Val Thr Ser Val Glu Glu Trp Lys Cys	410	415	420

Met	Tyr	Thr	Pro	Lys	Met	Pro	Ile	Ala	Gln	Pro	Cys	Asn	Ile	Phe	
				425					430					435	
Asp	Cys	Pro	Lys	Trp	Leu	Ala	Gln	Glu	Trp	Ser	Pro	Cys	Thr	Val	
				440					445					450	
Thr	Cys	Gly	Gln	Gly	Leu	Arg	Tyr	Arg	Val	Val	Leu	Cys	Ile	Asp	
				455					460					465	
His	Arg	Gly	Met	His	Thr	Gly	Gly	Cys	Ser	Pro	Lys	Thr	Lys	Pro	
				470					475					480	
His	Ile	Lys	Glu	Glu	Cys	Ile	Val	Pro	Thr	Pro	Cys	Tyr	Lys	Pro	
				485					490					495	
Lys	Glu	Lys	Leu	Pro	Val	Glu	Ala	Lys	Leu	Pro	Trp	Phe	Lys	Gln	
				500					505					510	
Ala	Gln	Glu	Leu	Glu	Glu	Gly	Ala	Ala	Val	Ser	Glu	Glu	Pro	Ser	
				515					520					525	

<210> 302

<211> 1533

<212> DNA

<213> Homo sapiens

<400> 302

```

cggacgcgtg ggcggcggtc gcggaactcc cgtggagggg ccggtgggcc 50
ctcgggcctg acagatggca gtggccactg cggcggcagt actggccgct 100
ctgggcgggg cgctgtggtt ggcggcccg cggttcgtgg ggcccagggt 150
ccagcggctg cgcagaggcg gggaccccg cctcatgcac ggaagactg 200
tgctgatcac cggggcgaa agcggcctgg gccgcgccac ggccgccgag 250
ctactgcgcc tgggagcgcg ggtgatcatg ggctgccggg accgcgcgcg 300
cgccgaggag gcggcggtc agctccgccc cgagctccgc caggccgcgg 350
agtgcggccc agagcctggc gtcagcgggg tgggcgagct catagtccgg 400
gagctggacc tcgcctcgct gcgctcgggt cgcgccttct gccaggaaat 450
gctccaggaa gaggcctaggc tggatgtctt gatcaataac gcagggatct 500
tccagtcccc ttacatgaag actgaagatg ggtttgagat gcagttcgga 550
gtgaaccatc tggggcactt tctactcacc aatcttctcc ttggactcct 600
caaaagtcca gctccagca ggattgtggt agtttcttcc aaactttata 650
aatacggaga catcaatctt gatgactga acagtgaaca aagctataat 700
aaaagctttt gttatagccg gagcaaactg gctaacattc tttttaccag 750

```

ggaactagcc cgccgcttag aaggcacaaa tgtcacccgtc aatgtgttgc 800  
 atcctgggtat tgtacggaca aatctgggga ggcacataca cattccactg 850  
 ttgggtcaaac cactcttcaa tttgggtgtca tgggcttttt tcaaaaactcc 900  
 agtagaaggt gccagactt ccatttattt ggcctcttca cctgaggttag 950  
 aaggagtgtc aggaagatac tttggggatt gtaaagagga agaactgttg 1000  
 cccaaagcta tggatgaatc tgttgcaaga aaactctggg atatcagtga 1050  
 agtgatgggtt ggcctgctaa aataggaaca aggagtaaaa gagctgttta 1100  
 taaaactgca tatcagttat atctgtgatc aggaatgggtg tggattgaga 1150  
 acttgttact tgaagaaaaa gaattttgat attggaatag cctgctaaga 1200  
 ggtacatgtg ggtattttgg agttactgaa aaattatttt tgggataaga 1250  
 gaatttcagc aaagatgttt taaatatata tagtaagtat aatgaataat 1300  
 aagtacaatg aaaaatacaa ttatattgta aaattataac tgggcaagca 1350  
 tggatgacat attaataattt gtcagaatta agtgactcaa agtgctatcg 1400  
 agagggttttt caagtatctt tgagtttcat ggccaaagtg ttaactagtt 1450  
 ttactacaat gtttggtgtt tgtgtggaaa ttatctgcct ggtgtgtgca 1500  
 cacaagtctt acttgaata aatttactgg tac 1533

<210> 303

<211> 336

<212> PRT

<213> Homo sapiens

<400> 303

Met	Ala	Val	Ala	Thr	Ala	Ala	Ala	Val	Leu	Ala	Ala	Leu	Gly	Gly	1	5	10	15
Ala	Leu	Trp	Leu	Ala	Ala	Arg	Arg	Phe	Val	Gly	Pro	Arg	Val	Gln	20	25	30	
Arg	Leu	Arg	Arg	Gly	Gly	Asp	Pro	Gly	Leu	Met	His	Gly	Lys	Thr	35	40	45	
Val	Leu	Ile	Thr	Gly	Ala	Asn	Ser	Gly	Leu	Gly	Arg	Ala	Thr	Ala	50	55	60	
Ala	Glu	Leu	Leu	Arg	Leu	Gly	Ala	Arg	Val	Ile	Met	Gly	Cys	Arg	65	70	75	
Asp	Arg	Ala	Arg	Ala	Glu	Glu	Ala	Ala	Gly	Gln	Leu	Arg	Arg	Glu	80	85	90	
Leu	Arg	Gln	Ala	Ala	Glu	Cys	Gly	Pro	Glu	Pro	Gly	Val	Ser	Gly				



	95		100		105
Val Gly Glu Leu	Ile	Val Arg Glu Leu	Asp	Leu Ala Ser Leu	Arg
	110		115		120
Ser Val Arg Ala	Phe	Cys Gln Glu Met	Leu	Gln Glu Glu Pro	Arg
	125		130		135
Leu Asp Val Leu	Ile	Asn Asn Ala Gly	Ile	Phe Gln Cys Pro	Tyr
	140		145		150
Met Lys Thr Glu	Asp	Gly Phe Glu Met	Gln	Phe Gly Val Asn	His
	155		160		165
Leu Gly His Phe	Leu	Leu Thr Asn Leu	Leu	Leu Gly Leu Leu	Lys
	170		175		180
Ser Ser Ala Pro	Ser	Arg Ile Val Val	Val	Ser Ser Lys Leu	Tyr
	185		190		195
Lys Tyr Gly Asp	Ile	Asn Phe Asp Asp	Leu	Asn Ser Glu Gln	Ser
	200		205		210
Tyr Asn Lys Ser	Phe	Cys Tyr Ser Arg	Ser	Lys Leu Ala Asn	Ile
	215		220		225
Leu Phe Thr Arg	Glu	Leu Ala Arg Arg	Leu	Glu Gly Thr Asn	Val
	230		235		240
Thr Val Asn Val	Leu	His Pro Gly Ile	Val	Arg Thr Asn Leu	Gly
	245		250		255
Arg His Ile His	Ile	Pro Leu Leu Val	Lys	Pro Leu Phe Asn	Leu
	260		265		270
Val Ser Trp Ala	Phe	Phe Lys Thr Pro	Val	Glu Gly Ala Gln	Thr
	275		280		285
Ser Ile Tyr Leu	Ala	Ser Ser Pro Glu	Val	Glu Gly Val Ser	Gly
	290		295		300
Arg Tyr Phe Gly	Asp	Cys Lys Glu Glu	Glu	Leu Leu Pro Lys	Ala
	305		310		315
Met Asp Glu Ser	Val	Ala Arg Lys Leu	Trp	Asp Ile Ser Glu	Val
	320		325		330
Met Val Gly Leu	Leu	Lys			
	335				

<210> 304

<211> 521

<212> DNA

<213> Homo sapiens

<220>

<221> unsure

<222> 20, 34, 62, 87, 221, 229

<223> unknown base

<400> 304

ggggattgta aagaggaagn actgtgccca aagntatgga tgaatctgtt 50  
gcaagaaaat tntgggatat cagtgaagtg atggttngcc tgctaaaata 100  
ggaacaagga gtaaaagagc tgtttataaa actgcatatc agttatatct 150  
gtgatcagga atgggtgtgga ttgagaactt gttacttgaa gaaaaagaat 200  
tttgatattg gaatagcctg ntaagaggna catgtgggta ttttgagatt 250  
actgaaaaat tatttttggg ataagagaat ttcagcaaag atgttttaaa 300  
tatatatagt aagtataatg aataataagt acaatgaaaa atacaattat 350  
attgtaaaat tataactggg caagcatgga tgacatatta atatttgtca 400  
gaattaagtg actcaaagtg ctatcgagag gtttttcaag tatctttgag 450  
tttcatggcc aaagtgttaa ctagttttac tacaatgttt ggtgtttgtg 500  
tggaattat ctgcctggct t 521

<210> 305

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 305

ccaggaaatg ctccaggaag agcc 24

<210> 306

<211> 26

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 306

gcccatgaca ccaaattgaa gagtgg 26

<210> 307

<211> 45

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 307

aacgcaggga tcttccagtg cccttacatg aagactgaag atggg 45

<210> 308

<211> 1523

<212> DNA

<213> Homo sapiens

<400> 308

gagaggacga ggtgccgctg cctggagaat cctccgctgc cgtcggctcc 50  
eggagcccg ccctttccta acccaacca acctagcca gtcccagccg 100  
ccagcgctg tccctgtcac ggaccccg gttaccatgc atcctgccgt 150  
cttctatcc ttaccgacc tcagatgctc ccttctgctc ctggtaactt 200  
gggtttttac tctgtaca actgaaata caagtcttg tacagagaat 250  
atagatgaaa ttttaacaa tgctgatgtt gctttagtaa atttttatgc 300  
tgactggtgt cgtttcagtc agatgttgca tccaattttt gaggaagctt 350  
ccgatgtcat taaggaagaa tttccaaatg aaaatcaagt agtgtttgcc 400  
agagttgatt gtgatcagca ctctgacata gccagagat acaggataag 450  
caaataccca accctcaaat tgtttcgtaa tgggatgatg atgaagagag 500  
aatacagggg tcagcgatca gtgaaagcat tggcagatta catcaggcaa 550  
caaaaaagtg accccattca agaaattcgg gacttagcag aaatcaccac 600  
tcttgatcgc agcaaaagaa atatcattgg atattttgag caaaaggact 650  
cggacaacta tagagttttt gaacgagtag cgaatatattt gcatgatgac 700  
tgtgcctttc tttctgcatt tggggatgtt tcaaaaccgg aaagatatag 750  
tggcgacaac ataatttaca aaccaccagg gcattctgct ccggatatgg 800  
tgtacttggg agctatgaca aattttgatg tgacttaca ttggattcaa 850  
gataaatgtg ttctcttgt ccgagaaata acatttgaaa atggagagga 900  
attgacagaa gaaggactgc cttttctcat actctttcac atgaaagaag 950  
atacagaaag tttagaaata ttccagaatg aagtagctcg gcaattaata 1000  
agtgaaaaag gtacaataaa ctttttacat gccgattgtg acaaatttag 1050  
acatcctctt ctgcacatac agaaaactcc agcagattgt cctgtaatcg 1100  
ctattgacag ctttaggcat atgtatgtt ttggagactt caaagatgta 1150  
ttaattcctg gaaaactcaa gcaattcgta tttgacttac attctggaaa 1200  
actgcacaga gaattccatc atggacctga cccaactgat acagccccag 1250

gagagcaagc ccaagatgta gcaagcagtc cacctgagag ctccctccag 1300  
 aaactagcac ccagtgaata taggtatact ctattgaggg atcgagatga 1350  
 gcttttaaaaa cttgaaaaac agtttgtaag cctttcaaca gcagcatcaa 1400  
 cctacgtggt ggaaatagta aacctatatt ttcataattc tatgtgtatt 1450  
 tttattttga ataaacagaa agaaatttaa aaaaaaaaaa aaaaaaaaaa 1500  
 aaaaaaaaaa aaaaaaaaaa aaa 1523

<210> 309

<211> 406

<212> PRT

<213> Homo sapiens

<400> 309

Met	His	Pro	Ala	Val	Phe	Leu	Ser	Leu	Pro	Asp	Leu	Arg	Cys	Ser	1	5	10	15
Leu	Leu	Leu	Leu	Val	Thr	Trp	Val	Phe	Thr	Pro	Val	Thr	Thr	Glu	20	25	30	
Ile	Thr	Ser	Leu	Ala	Thr	Glu	Asn	Ile	Asp	Glu	Ile	Leu	Asn	Asn	35	40	45	
Ala	Asp	Val	Ala	Leu	Val	Asn	Phe	Tyr	Ala	Asp	Trp	Cys	Arg	Phe	50	55	60	
Ser	Gln	Met	Leu	His	Pro	Ile	Phe	Glu	Glu	Ala	Ser	Asp	Val	Ile	65	70	75	
Lys	Glu	Glu	Phe	Pro	Asn	Glu	Asn	Gln	Val	Val	Phe	Ala	Arg	Val	80	85	90	
Asp	Cys	Asp	Gln	His	Ser	Asp	Ile	Ala	Gln	Arg	Tyr	Arg	Ile	Ser	95	100	105	
Lys	Tyr	Pro	Thr	Leu	Lys	Leu	Phe	Arg	Asn	Gly	Met	Met	Met	Lys	110	115	120	
Arg	Glu	Tyr	Arg	Gly	Gln	Arg	Ser	Val	Lys	Ala	Leu	Ala	Asp	Tyr	125	130	135	
Ile	Arg	Gln	Gln	Lys	Ser	Asp	Pro	Ile	Gln	Glu	Ile	Arg	Asp	Leu	140	145	150	
Ala	Glu	Ile	Thr	Thr	Leu	Asp	Arg	Ser	Lys	Arg	Asn	Ile	Ile	Gly	155	160	165	
Tyr	Phe	Glu	Gln	Lys	Asp	Ser	Asp	Asn	Tyr	Arg	Val	Phe	Glu	Arg	170	175	180	
Val	Ala	Asn	Ile	Leu	His	Asp	Asp	Cys	Ala	Phe	Leu	Ser	Ala	Phe	185	190	195	

Gly Asp Val Ser Lys Pro Glu Arg Tyr Ser Gly Asp Asn Ile Ile	200	205	210
Tyr Lys Pro Pro Gly His Ser Ala Pro Asp Met Val Tyr Leu Gly	215	220	225
Ala Met Thr Asn Phe Asp Val Thr Tyr Asn Trp Ile Gln Asp Lys	230	235	240
Cys Val Pro Leu Val Arg Glu Ile Thr Phe Glu Asn Gly Glu Glu	245	250	255
Leu Thr Glu Glu Gly Leu Pro Phe Leu Ile Leu Phe His Met Lys	260	265	270
Glu Asp Thr Glu Ser Leu Glu Ile Phe Gln Asn Glu Val Ala Arg	275	280	285
Gln Leu Ile Ser Glu Lys Gly Thr Ile Asn Phe Leu His Ala Asp	290	295	300
Cys Asp Lys Phe Arg His Pro Leu Leu His Ile Gln Lys Thr Pro	305	310	315
Ala Asp Cys Pro Val Ile Ala Ile Asp Ser Phe Arg His Met Tyr	320	325	330
Val Phe Gly Asp Phe Lys Asp Val Leu Ile Pro Gly Lys Leu Lys	335	340	345
Gln Phe Val Phe Asp Leu His Ser Gly Lys Leu His Arg Glu Phe	350	355	360
His His Gly Pro Asp Pro Thr Asp Thr Ala Pro Gly Glu Gln Ala	365	370	375
Gln Asp Val Ala Ser Ser Pro Pro Glu Ser Ser Phe Gln Lys Leu	380	385	390
Ala Pro Ser Glu Tyr Arg Tyr Thr Leu Leu Arg Asp Arg Asp Glu	395	400	405

Leu

<210> 310  
 <211> 182  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> unsure  
 <222> 36, 48  
 <223> unknown base

<400> 310

attaaggaag aatttccaaa tgaaaatcaa gtagtntttg ccagagtnga 50  
ttgtgatcag cactctgaca tagcccagag atacaggata agcaaatacc 100  
caaccctcaa attgtttcgt aatgggatga tgatgaagag agaatacagg 150  
ggtcagcgat cagtgaagc attggcagat ta 182

<210> 311  
<211> 598  
<212> DNA  
<213> Homo sapiens

<220>  
<221> unsure  
<222> 38, 59, 140, 169, 174, 183, 282-283, 294-295, 319, 396  
<223> unknown base

<400> 311  
agaggcctct ctggaagttg tcccgggtgt tcgcgcngg agcccgggtc 50  
gagaggacna ggtgccgtg cctggagaat cctccgtgc cgtcggctcc 100  
cggagcccag ccctttccta acccaacca acctagccn gtcccagccg 150  
ccagcgctg tccctgtcnc ggancaccgc gtnaccatgc atcctgccgt 200  
cttctatcc ttaccgacc tcagatgtc cttctgtc ctggttaactt 250  
gggtttttac tctgttaaca actgaaataa cnngtcttga tacnnagaat 300  
atagatgaaa ttttaacna tgctgatgtg gctttagtca atttttatgc 350  
tgactggtgt cgtttcagtc agatgtggca tccaattttt gaggangctt 400  
ccgatgtcat taaggaagaa tttccaaatg aaaatcaagt agtgtttgcc 450  
agagttgatt gtgatcagca ctctgacata gccagagat acaggataag 500  
caaataccca accctcaaat tgtttcgtaa tgggatgatg atgaagagag 550  
aatacagggg tcagcgatca gtgaaagcat tggcagatta catcaggc 598

<210> 312  
<211> 22  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 312  
tgagaggcct ctctggaagt tg 22

<210> 313  
<211> 19  
<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 313

gtcagcgatc agtgaaagc 19

<210> 314

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 314

ccagaatgaa gtagctcggc 20

<210> 315

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 315

ccgactcaaa atgcattgtc 20

<210> 316

<211> 19

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 316

catttggcag gaattgtcc 19

<210> 317

<211> 18

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 317

ggtgctatag gccaaagg 18

<210> 318

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 318

ctgtatctct gggctatgtc agag 24

<210> 319

<211> 25

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 319

ctacatataa tggcacatgt cagcc 25

<210> 320

<211> 46

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 320

cgtcttccta tccttaccog acctcagatg ctcccttctg ctctg 46

<210> 321

<211> 1333

<212> DNA

<213> Homo sapiens

<400> 321

gcccacgcgt ccgatggcgt tcacgttcgc ggccttctgc tacatgctgg 50

cgctgctgct cactgccgog ctcatcttct tcgccatttg gcacattata 100

gcatttgatg agctgaagac tgattacaag aatcctatag accagtgtaa 150

taccctgaat ccccttgtag tcccagagta cctcatccac gctttcttct 200

gtgtcatgtt tctttgtgca gcagagtggc ttacactggg tctcaatatg 250

cccctcttgg catatcatat ttggaggtat atgagtagac cagtgatgag 300

tggcccagga ctctatgacc ctacaaccat catgaatgca gatattctag 350

catattgtca gaaggaagga tggcgaaaat tagcttttta tcttctagca 400

tttttttact acctatatgg catgatctat gttttggtga gctcttagaa 450

caacacacag aagaattggt ccagttaagt gcatgcaaaa agccaccaa 500

tgaagggatt ctatccagca agatcctgtc caagagtagc ctgtggaatc 550

tgatcagtta ctttaaaaaa tgactcctta ttttttaaat gtttccacat 600



ttttgcttgt ggaaagactg ttttcatatg ttatactcag ataaagattt 650  
 taaatggtat tacgtataaa ttaatatata atgattacct ctggtgttga 700  
 caggtttgaa cttgcacttc ttaaggaaca gccataatcc totgaatgat 750  
 gcattaatta ctgactgtcc tagtacattg gaagcttttg tttataggaa 800  
 cttgtagggc tcatttttgg ttcatatgaaa cagtatctaa ttataaatta 850  
 gctgtagata tcagggtgctt ctgatgaagt gaaaatgtat atctgactag 900  
 tgggaaactt catgggtttc ctcatctgtc atgtcgatga ttatatatgg 950  
 atacatttac aaaaataaaa agcgggaatt ttcccttcgc ttgaatatta 1000  
 tccctgtata ttgcatgaat gagagatttc ccatatttcc atcagagtaa 1050  
 taaatatact tgctttaatt ctttaagcata agtaaactg atataaaaat 1100  
 atatgctgaa ttacttgtga agaatgcatt taaagctatt ttaaattgtg 1150  
 ttttatttgt aagacattac ttattaagaa attggttatt atgcttactg 1200  
 ttctaactcg gtggttaaagg tattcttaag aatttgcagg tactacagat 1250  
 tttcaaaact gaatgagaga aaattgtata accatcctgc tgttccttta 1300  
 gtgcaataca ataaaactct gaaattaaga ctc 1333

<210> 322

<211> 144

<212> PRT

<213> Homo sapiens

<400> 322

Met	Ala	Phe	Thr	Phe	Ala	Ala	Phe	Cys	Tyr	Met	Leu	Ala	Leu	Leu
1				5					10				15	
Leu	Thr	Ala	Ala	Leu	Ile	Phe	Phe	Ala	Ile	Trp	His	Ile	Ile	Ala
				20					25				30	
Phe	Asp	Glu	Leu	Lys	Thr	Asp	Tyr	Lys	Asn	Pro	Ile	Asp	Gln	Cys
				35					40				45	
Asn	Thr	Leu	Asn	Pro	Leu	Val	Leu	Pro	Glu	Tyr	Leu	Ile	His	Ala
				50					55				60	
Phe	Phe	Cys	Val	Met	Phe	Leu	Cys	Ala	Ala	Glu	Trp	Leu	Thr	Leu
				65					70				75	
Gly	Leu	Asn	Met	Pro	Leu	Leu	Ala	Tyr	His	Ile	Trp	Arg	Tyr	Met
				80					85				90	
Ser	Arg	Pro	Val	Met	Ser	Gly	Pro	Gly	Leu	Tyr	Asp	Pro	Thr	Thr
				95					100				105	

Ile	Met	Asn	Ala	Asp	Ile	Leu	Ala	Tyr	Cys	Gln	Lys	Glu	Gly	Trp
				110					115					120
Cys	Lys	Leu	Ala	Phe	Tyr	Leu	Leu	Ala	Phe	Phe	Tyr	Tyr	Leu	Tyr
				125					130					135
Gly	Met	Ile	Tyr	Val	Leu	Val	Ser	Ser						
														140

<210> 323  
 <211> 477  
 <212> DNA  
 <213> Homo sapiens

<400> 323  
 attatagcat ttgatgagct gaagactgat tacaagatcc tatagaccag 50  
 tgtaataccc tgaatcccct tgtactccca gagtacctca tccacgcttt 100  
 cttctgtgtc atgtttcttt gtgcagcaga gtggcttaca ctgggtctca 150  
 atatgccctt cttggcatat catatttgga ggtatatgag tagaccagtg 200  
 atgagtggcc caggactcta tgaccctaca accatcatga atgcagatat 250  
 tctagcatat tgtcagaagg aaggatgggtg caaattagct ttttatcttc 300  
 tagcattttt ttactaccta tatggcatga tctatgtttt ggtgagctct 350  
 tagaacaaca cacagaagaa ttggtccagt taagtgcattg caaaaagcca 400  
 ccaaataaag ggattctatc cagcaagatc ctgtccaaga gtagcctgtg 450  
 gaatctgac agttacttta aaaaatg 477

<210> 324  
 <211> 43  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 324  
 tgtaaaacga cggccagtta aatagacctg caattattaa tct 43

<210> 325  
 <211> 41  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 325  
 caggaaacag ctatgaccac ctgcacacct gcaaattccat t 41

<210> 326  
<211> 20  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 326  
gtgcagcaga gtggcttaca 20

<210> 327  
<211> 20  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 327  
actggaccaa ttcttctgtg 20

<210> 328  
<211> 45  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 328  
gatattctag catattgtca gaaggaagga tggcgcaaat tagct 45

<210> 329  
<211> 1174  
<212> DNA  
<213> Homo sapiens

<400> 329  
cggacgcgtg ggggaaaccc ttccgagaaa acagcaacaa gctgagctgc 50  
tgtgacagag gggaaacaaga tggcggcgcc gaaggggagc ctctgggtga 100  
ggaccaact ggggctcccg ccgctgctgc tgctgaccat ggccttgccc 150  
ggagggttcgg ggaccgcttc ggctgaagca ttgactcgg tcttgggtga 200  
tacggcgtct tgccaccggg cctgtcagtt gacctacccc ttgcacacct 250  
accctaagga agaggagttg tacgcatgtc agagagggtg caggctgttt 300  
tcaatttgctc agtttggtga tgatggaatt gacttaaadc gaactaaatt 350  
ggaatgtgaa tctgcatgta cagaagcata ttcccaatct gatgagcaat 400  
atgcttgcca tcttggttgc cagaatcagc tgccattcgc tgaactgaga 450

caagaacaac ttatgtccct gatgccaaaa atgcacetae tctttcctct 500  
 aactctggtg aggtcattct ggagtacat gatggactcc gcacagagct 550  
 tcataacctc ttcattgact ttttatcttc aagccgatga cggaaaaata 600  
 gttatattcc agtctaagcc agaaatccag tacgcaccac atttgagca 650  
 ggagcctaca aatttgagag aatcatctct aagcaaaatg tcctatctgc 700  
 aaatgagaaa ttcacaagcg cacaggaatt ttcttgaaga tggagaaagt 750  
 gatggctttt taagatgcct ctctcttaac tctgggtgga ttttaactac 800  
 aactcttgct ctctcgggtg tggatttgct ttggatttgc tgtgcaactg 850  
 ttgctacagc tgtggagcag tatgttcctc ctgagaagct gaggatctat 900  
 ggtgacttgg agtttatgaa tgaacaaaag ctaaacagat atccagcttc 950  
 ttctcttggtg gttgttagat ctaaaactga agatcatgaa gaagcagggc 1000  
 ctctacctac aaaagtgaat ctgtctcatt ctgaaattta agcatttttc 1050  
 ttttaaaaga caagtgaat agacatctaa aattccactc ctcatagagc 1100  
 ttttaaaatg gtttcattgg atataggcct taagaaatca ctataaaatg 1150  
 caaataaagt tactcaaata tggtg 1174

<210> 330

<211> 323

<212> PRT

<213> Homo sapiens

<400> 330

Met	Ala	Ala	Pro	Lys	Gly	Ser	Leu	Trp	Val	Arg	Thr	Gln	Leu	Gly
1				5					10					15
Leu	Pro	Pro	Leu	Leu	Leu	Leu	Thr	Met	Ala	Leu	Ala	Gly	Gly	Ser
			20						25					30
Gly	Thr	Ala	Ser	Ala	Glu	Ala	Phe	Asp	Ser	Val	Leu	Gly	Asp	Thr
			35						40					45
Ala	Ser	Cys	His	Arg	Ala	Cys	Gln	Leu	Thr	Tyr	Pro	Leu	His	Thr
			50						55					60
Tyr	Pro	Lys	Glu	Glu	Glu	Leu	Tyr	Ala	Cys	Gln	Arg	Gly	Cys	Arg
			65						70					75
Leu	Phe	Ser	Ile	Cys	Gln	Phe	Val	Asp	Asp	Gly	Ile	Asp	Leu	Asn
			80						85					90
Arg	Thr	Lys	Leu	Glu	Cys	Glu	Ser	Ala	Cys	Thr	Glu	Ala	Tyr	Ser
			95						100					105

Gln Ser Asp Glu Gln Tyr Ala Cys His	Leu Gly Cys Gln Asn Gln	110	115	120
Leu Pro Phe Ala Glu Leu Arg Gln Glu	Gln Leu Met Ser Leu Met	125	130	135
Pro Lys Met His Leu Leu Phe Pro Leu	Thr Leu Val Arg Ser Phe	140	145	150
Trp Ser Asp Met Met Asp Ser Ala Gln	Ser Phe Ile Thr Ser Ser	155	160	165
Trp Thr Phe Tyr Leu Gln Ala Asp Asp	Gly Lys Ile Val Ile Phe	170	175	180
Gln Ser Lys Pro Glu Ile Gln Tyr Ala	Pro His Leu Glu Gln Glu	185	190	195
Pro Thr Asn Leu Arg Glu Ser Ser Leu	Ser Lys Met Ser Tyr Leu	200	205	210
Gln Met Arg Asn Ser Gln Ala His Arg	Asn Phe Leu Glu Asp Gly	215	220	225
Glu Ser Asp Gly Phe Leu Arg Cys Leu	Ser Leu Asn Ser Gly Trp	230	235	240
Ile Leu Thr Thr Thr Leu Val Leu Ser	Val Met Val Leu Leu Trp	245	250	255
Ile Cys Cys Ala Thr Val Ala Thr Ala	Val Glu Gln Tyr Val Pro	260	265	270
Ser Glu Lys Leu Ser Ile Tyr Gly Asp	Leu Glu Phe Met Asn Glu	275	280	285
Gln Lys Leu Asn Arg Tyr Pro Ala Ser	Ser Leu Val Val Val Arg	290	295	300
Ser Lys Thr Glu Asp His Glu Glu Ala	Gly Pro Leu Pro Thr Lys	305	310	315
Val Asn Leu Ala His Ser Glu Ile		320		

<210> 331

<211> 350

<212> DNA

<213> Homo sapiens

<400> 331

ttgggtgata cggcgtcttg ccaccgggcc tgtcagttga cctaccctt 50

gcacacctac cctaaggaag aggagttgta cgcattgcag agaggttgca 100

ggctgttttc aatttgcag tttgtggatg atggaattga cttaaatacga 150

actaaattgg aatgtgaatc tgcattgtaca gaagcatatt cccaatctga 200  
tgagcaatat gcttgccatc ttggttgcca gaatcagctg ccattcgctg 250  
aactgagaca agaacaactt atgtccctga tgccaaaaat gcacctactc 300  
tttctcttaa ctctggtgag gtcattctgg agtgacatga tggactccgc 350

<210> 332

<211> 562

<212> DNA

<213> Homo sapiens

<220>

<221> unsure

<222> 47

<223> unknown base

<400> 332

cacactggcc ggatctttta gagtcctttg accttgacca agggtcngga 50  
aaacagcaac aagctgagct gctgtgacag agggacaag atggcggcgc 100  
cgaagggagc ctttgggtga ggacccaact ggggctcccg ccgctgctgc 150  
tgctgaccat ggccttgcc ggaggttcgg ggaccgcttc ggctgaagca 200  
tttgactcgg tcttgggtga tacggcgtct tgccaccggg cctgtcagtt 250  
gacctacccc ttgcacacct accctaagga agaggagttg tacgcatgtc 300  
agagagggtg caggctgttt tcaatttgtc agtttgtgga tgatggaatt 350  
gacttaaadc gaactaaatt ggaatgtgaa tctgcatgta cagaagcata 400  
ttcccaatct gatgagcaat atgcttgcca tcttggttgc cagaatcagc 450  
tgccattcgc tgaactgaga caagaacaac ttatgtccct gatgccaaaa 500  
atgcacctac tctttcctct aactctggtg aggtcattct ggagtgcacat 550  
gatggactcc gc 562

<210> 333

<211> 22

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 333

acaagctgag ctgctgtgac ag 22

<210> 334

<211> 22

<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 334  
tgattctggc aaccaagatg gc 22

<210> 335  
<211> 40  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 335  
atggccttg cccgaggttc ggggaccgct tcggctgaag 40

<210> 336  
<211> 1885  
<212> DNA  
<213> Homo sapiens

<400> 336  
gcgagggtggc gatcgctgag aggcaggagg gccgaggcgg gcctgggagg 50  
cgggcccgag gtggggcgcc gctggggccg gcccgcacgg gcttcattctg 100  
aggcgcgacg gcccgcgacc gagcgtgcgg actggcctcc caagcgtggg 150  
gcgacaagct gccggagctg caatgggccc cggtctggga ttcttgtttg 200  
gcctcctggg cgccgtgtgg ctgctcagct cgggccacgg agaggagcag 250  
cccccgaga cagcggcaca gaggtgcttc tgccagggtta gtggttactt 300  
ggatgattgt acctgtgatg ttgaaacctat tgatagattt aataactaca 350  
ggcttttccc aagactacaa aaacttcttg aaagtgaacta ctttaggtat 400  
tacaaggtaa acctgaagag gccgtgtcct ttctggaatg acatcagcca 450  
gtgtggaaga agggactgtg ctgtcaaacc atgtcaatct gatgaagttc 500  
ctgatggaat taaatctgcg agctacaagt attctgaaga agccaataat 550  
ctcattgaag aatgtgaaca agctgaacga cttggagcag tggatgaatc 600  
tctgagttag gaaacacaga aggctgttct tcagtggacc aagcatgatg 650  
attcttcaga taacttctgt gaagctgatg acattcagtc ccctgaagct 700  
gaatatgtag atttgcttct taatcctgag cgctacactg gttacaaggg 750  
accagatgct tggaaaatat ggaatgtcat ctacgaagaa aactgtttta 800

agccacagac aattaaaga cctttaaatc ctttggett c tgggtcaaggg 850  
 acaagtgaag agaacacttt ttacagttgg ctagaaggtc tctgtgtaga 900  
 aaaaagagca ttctacagac ttatatctgg cctacatgca agcattaatg 950  
 tgcatttgag tgcaagatat cttttacaag agacctgggt agaaaagaaa 1000  
 tggggacaca acattacaga atttcaacag cgatttgatg gaattttgac 1050  
 tgaaggagaa ggtccaagaa ggcttaagaa cttgtat ttt ctctacttaa 1100  
 tagaactaag ggctttatcc aaagtgttac cattcttcga gcgcccagat 1150  
 tttcaactct ttactggaaa taaaattcag gatgaggaaa acaaaatgtt 1200  
 acttctggaa atacttcatg aaatcaagtc atttcctttg cattttgatg 1250  
 agaattcatt ttttgctggg gataaaaaag aagcacacaa actaaaggag 1300  
 gactttcgac tgcattttag aaatatttca agaattatgg attgtgttgg 1350  
 ttgttttaaa tgctgtctgt ggggaaagct tcagactcag ggtttgggca 1400  
 ctgctctgaa gatcttattt tctgagaaat tgatagcaaa tatgccagaa 1450  
 agtggaccta gttatgaatt ccatctaacc agacaagaaa tagtatcatt 1500  
 attcaacgca tttggaagaa tttctacaag tgtgaaagaa ttagaaaact 1550  
 tcaggaactt gttacagaat attcattaaa gaaaacaagc tgatatgtgc 1600  
 ctgtttctgg acaatggagg cgaaagagtg gaatttcatt caaaggcata 1650  
 atagcaatga cagtcttaag ccaaacttt tatataaagt tgcttttgta 1700  
 aaggagaatt atattgtttt aagtaaacac atttttaaaa attgtgttaa 1750  
 gtctatgtat aatactactg tgagtaaaag taatacttta ataatgtggt 1800  
 acaaatttta aagtttaata ttgaataaaa ggaggattat caaattaaaa 1850  
 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaa 1885

<210> 337

<211> 468

<212> PRT

<213> Homo sapiens

<400> 337

Met	Gly	Arg	Gly	Trp	Gly	Phe	Leu	Phe	Gly	Leu	Leu	Gly	Ala	Val
1				5					10				15	

Trp	Leu	Leu	Ser	Ser	Gly	His	Gly	Glu	Glu	Gln	Pro	Pro	Glu	Thr
			20					25					30	



Ala	Ala	Gln	Arg	Cys	Phe	Cys	Gln	Val	Ser	Gly	Tyr	Leu	Asp	Asp	35	40	45
Cys	Thr	Cys	Asp	Val	Glu	Thr	Ile	Asp	Arg	Phe	Asn	Asn	Tyr	Arg	50	55	60
Leu	Phe	Pro	Arg	Leu	Gln	Lys	Leu	Leu	Glu	Ser	Asp	Tyr	Phe	Arg	65	70	75
Tyr	Tyr	Lys	Val	Asn	Leu	Lys	Arg	Pro	Cys	Pro	Phe	Trp	Asn	Asp	80	85	90
Ile	Ser	Gln	Cys	Gly	Arg	Arg	Asp	Cys	Ala	Val	Lys	Pro	Cys	Gln	95	100	105
Ser	Asp	Glu	Val	Pro	Asp	Gly	Ile	Lys	Ser	Ala	Ser	Tyr	Lys	Tyr	110	115	120
Ser	Glu	Glu	Ala	Asn	Asn	Leu	Ile	Glu	Glu	Cys	Glu	Gln	Ala	Glu	125	130	135
Arg	Leu	Gly	Ala	Val	Asp	Glu	Ser	Leu	Ser	Glu	Glu	Thr	Gln	Lys	140	145	150
Ala	Val	Leu	Gln	Trp	Thr	Lys	His	Asp	Asp	Ser	Ser	Asp	Asn	Phe	155	160	165
Cys	Glu	Ala	Asp	Asp	Ile	Gln	Ser	Pro	Glu	Ala	Glu	Tyr	Val	Asp	170	175	180
Leu	Leu	Leu	Asn	Pro	Glu	Arg	Tyr	Thr	Gly	Tyr	Lys	Gly	Pro	Asp	185	190	195
Ala	Trp	Lys	Ile	Trp	Asn	Val	Ile	Tyr	Glu	Glu	Asn	Cys	Phe	Lys	200	205	210
Pro	Gln	Thr	Ile	Lys	Arg	Pro	Leu	Asn	Pro	Leu	Ala	Ser	Gly	Gln	215	220	225
Gly	Thr	Ser	Glu	Glu	Asn	Thr	Phe	Tyr	Ser	Trp	Leu	Glu	Gly	Leu	230	235	240
Cys	Val	Glu	Lys	Arg	Ala	Phe	Tyr	Arg	Leu	Ile	Ser	Gly	Leu	His	245	250	255
Ala	Ser	Ile	Asn	Val	His	Leu	Ser	Ala	Arg	Tyr	Leu	Leu	Gln	Glu	260	265	270
Thr	Trp	Leu	Glu	Lys	Lys	Trp	Gly	His	Asn	Ile	Thr	Glu	Phe	Gln	275	280	285
Gln	Arg	Phe	Asp	Gly	Ile	Leu	Thr	Glu	Gly	Glu	Gly	Pro	Arg	Arg	290	295	300
Leu	Lys	Asn	Leu	Tyr	Phe	Leu	Tyr	Leu	Ile	Glu	Leu	Arg	Ala	Leu	305	310	315

Ser	Lys	Val	Leu	Pro	Phe	Phe	Glu	Arg	Pro	Asp	Phe	Gln	Leu	Phe	320	325	330
Thr	Gly	Asn	Lys	Ile	Gln	Asp	Glu	Glu	Asn	Lys	Met	Leu	Leu	Leu	335	340	345
Glu	Ile	Leu	His	Glu	Ile	Lys	Ser	Phe	Pro	Leu	His	Phe	Asp	Glu	350	355	360
Asn	Ser	Phe	Phe	Ala	Gly	Asp	Lys	Lys	Glu	Ala	His	Lys	Leu	Lys	365	370	375
Glu	Asp	Phe	Arg	Leu	His	Phe	Arg	Asn	Ile	Ser	Arg	Ile	Met	Asp	380	385	390
Cys	Val	Gly	Cys	Phe	Lys	Cys	Arg	Leu	Trp	Gly	Lys	Leu	Gln	Thr	395	400	405
Gln	Gly	Leu	Gly	Thr	Ala	Leu	Lys	Ile	Leu	Phe	Ser	Glu	Lys	Leu	410	415	420
Ile	Ala	Asn	Met	Pro	Glu	Ser	Gly	Pro	Ser	Tyr	Glu	Phe	His	Leu	425	430	435
Thr	Arg	Gln	Glu	Ile	Val	Ser	Leu	Phe	Asn	Ala	Phe	Gly	Arg	Ile	440	445	450
Ser	Thr	Ser	Val	Lys	Glu	Leu	Glu	Asn	Phe	Arg	Asn	Leu	Leu	Gln	455	460	465

Asn Ile His

<210> 338

<211> 507

<212> DNA

<213> Homo sapiens

<220>

<221> unsure

<222> 101, 263, 376, 397, 426

<223> unknown base

<400> 338

gctggaaata tggatgtcat ctacgagaaa ctgttttaag ccacagacaa 50

ttaaaagacc tttaaactct ttggcttctg gtcaaggac aagtgaagag 100

nacacttttt acagttggct agaaggtctc tgtgtagaaa aaagagcatt 150

ctacagactt atatctggcc tacatgcaag cattaatgtg catttgagtg 200

caagatatct ttacaagag acctgggttag aaaagaaatg gggacacaac 250

attacagaat ttnaacagcg atttgatgga attttgactg aaggagaagg 300

tccaagaagg ctaagaact tgtatcttct ctacttaata gaactaaggg 350

ctttatccaa agtgttacca ttcttngagc gcccagattt tcaactnttt 400  
actggaaata aaattcagga tgaggnaaac aaaatgttac ttttggaat 450  
acttcatgaa atcaagtcac ttcttttgca ttttgatgag aattcatttt 500  
tttgctg 507

<210> 339

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 339

aagctgccgg agctgcaatg 20

<210> 340

<211> 21

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 340

ttgcttctta atcctgagcg c 21

<210> 341

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 341

aaaggaggac tttcgactgc 20

<210> 342

<211> 26

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 342

agagattcat ccaactgctcc aagtcg 26

<210> 343

<211> 25

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 343

tgtccagaaa caggcacata tcagc 25

<210> 344

<211> 50

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 344

agacagcggc acagaggtgc ttctgccagg ttagtggtta cttggatgat 50

<210> 345

<211> 1486

<212> DNA

<213> Homo sapiens

<400> 345

cggacgcgtg ggcggacgcg tgggcggacg cgtgggttgg gagggggcag 50

gatgggaggg aaagtgaaga aaacagaaaa ggagagggac agaggccaga 100

ggactttctca tactggacag aaaccgatca ggcatggaac tccccttcgt 150

cactcacctg ttcttgcccc tgggtgttct gacaggtctc tgctccccct 200

ttaacctgga tgaacatcac ccacgcctat tcccagggcc accagaagct 250

gaatttgat acagtgtctt acaacatgtt ggggggtggac agcgtatgat 300

gctggtgggc gccccctggg atgggccttc aggcgaccgg aggggggacg 350

tttatcgctg ccctgtaggg ggggcccaca atgccccatg tgccaagggc 400

cacttaggtg actaccaact gggaaattca tctcatcctg ctgtgaatat 450

gcacctgggg atgtctctgt tagagacaga tggatgatgg ggattcatgg 500

tgagctaagg agaggggtgtt ggcagtgtct ctgaagggtcc ataaaagaaa 550

aaagagaagt gtggttaaggg aaaatggtct gtgtggaggg gtcaaggagt 600

taaaaaccct agaaagcaaa aggtaggtaa tgtcaggag tagtcttcat 650

gcctccttca actgggagca tgttctgagg gtgccctccc aagcctggga 700

gtaactatct ccccatccc caggcctgtg cccctctctg gtctctgtgct 750

tgtggcagct ctgtcttcag ttctgggata tgtgccctgt tggatgcttc 800

attccagcct caggaagcc tggcaccac tgcccaacgt gagccagagg 850

aaggctgagt acttggttcc cagaaggaga tactgggtgg gaaaaagatg 900  
gggcaaagcg gtatgatgcc tggcaaaggg cctgcatggc tatectcatt 950  
gctacctaata gtgcttgcaa aagctccatg tttcctaaca gattcagact 1000  
cctggccagg tgtggtggcc cacacctgta attctagcac tttgggaggc 1050  
caaggtgggc agatcacttg aggtcaggag ttcaagacca gcctggccaa 1100  
catggtgaaa ctccatctct actaaaaaaaa aaaaaataca aaaattagct 1150  
gggtgcgcta gtgcatgcct gtaatctcat ctactcggga ggctaagaca 1200  
ggagactctc acttcaaccc aggaggtgga ggttgcggtg agccaagatt 1250  
gtgcctctgc actctagcgt gggtagacaga gtaagcgaga ctccatctca 1300  
aaaataataa taataataat tcagactcct tatcaggagt ccatgatctg 1350  
gcctggcaca gtaactcatg cctgtaatcc caacattttg ggaggccaac 1400  
gcaggaggat tgcttgaggt ctggaggttt gagaccagcc tgggcaacat 1450  
agaaagaccc catctctaaa taaatgtttt aaaaat 1486

<210> 346

<211> 124

<212> PRT

<213> Homo sapiens

<400> 346

Met	Glu	Leu	Pro	Phe	Val	Thr	His	Leu	Phe	Leu	Pro	Leu	Val	Phe
1				5					10					15
Leu	Thr	Gly	Leu	Cys	Ser	Pro	Phe	Asn	Leu	Asp	Glu	His	His	Pro
				20					25					30
Arg	Leu	Phe	Pro	Gly	Pro	Pro	Glu	Ala	Glu	Phe	Gly	Tyr	Ser	Val
				35					40					45
Leu	Gln	His	Val	Gly	Gly	Gly	Gln	Arg	Trp	Met	Leu	Val	Gly	Ala
				50					55					60
Pro	Trp	Asp	Gly	Pro	Ser	Gly	Asp	Arg	Arg	Gly	Asp	Val	Tyr	Arg
				65					70					75
Cys	Pro	Val	Gly	Gly	Ala	His	Asn	Ala	Pro	Cys	Ala	Lys	Gly	His
				80					85					90
Leu	Gly	Asp	Tyr	Gln	Leu	Gly	Asn	Ser	Ser	His	Pro	Ala	Val	Asn
				95					100					105
Met	His	Leu	Gly	Met	Ser	Leu	Leu	Glu	Thr	Asp	Gly	Asp	Gly	Gly
				110					115					120

Phe Met Val Ser

<210> 347  
<211> 509  
<212> DNA  
<213> Homo sapiens

<220>  
<221> unsure  
<222> 22  
<223> unknown base

<400> 347  
cacagtcccc caccatcact cntcccatc cttccaactt tatttttagc 50  
ttgccattgg gagggggcag gatgggaggg aaagtgaaga aaacagaaaa 100  
ggagaggggac agaggccaga ggacttctca tactggacag aaaccgatca 150  
ggcatggaac tccccttcgt cactcacctg ttcttgcccc tgggtgttcct 200  
gacaggtctc tgctccccct ttaacctgga tgaacatcac ccacgcctat 250  
tcccagggcc accagaagct gaatttgat acagtgtctt acaacatgtt 300  
gggggtggac agcgatggat gctggtgggc gccccctggg atgggccttc 350  
aggcgaccgg aggggggacg tttatcgctg ccctgtaggg gggggccaca 400  
atgccccatg tgccaagggc cacttaggtg actaccaact gggaaattca 450  
tctcatcctg ctgtgaatat gcacctgggg atgtctctgt tagagacaga 500  
tggtgatgg 509

<210> 348  
<211> 23  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 348  
agggacagag gccagaggac ttc 23

<210> 349  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 349  
caggtgcata ttcacagcag gatg 24

<210> 350  
<211> 45  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 350  
ggaactcccc ttogtcactc acctgttctt gcccctggtg ttcct 45

<210> 351  
<211> 2056  
<212> DNA  
<213> Homo sapiens

<400> 351  
aaagttacat tttctctgga actctcctag gccactccct gctgatgcaa 50  
catctggggtt tgggcagaaa ggagggtgct tcggagcccg ccctttctga 100  
gcttcctggg ccggtcttag aacaattcag gcttcgctgc gactcagacc 150  
tcagctccaa catatgcatt ctgaagaaag atggctgaga tggacagaat 200  
gctttatttt ggaaagaaac aatgttctag gtcaaactga gtctaccaa 250  
tgcagacttt cacaatgggt ctagaagaaa totggacaag tcttttcatg 300  
tggtttttct acgcattgat tccatgtttg ctacacagatg aagtggccat 350  
tctgcctgcc cctcagaacc tctctgtact ctcaaccaac atgaagcatc 400  
tcttgatgtg gagcccagtg atcgcgctg gagaaacagt gtactattct 450  
gtcgaatacc agggggagta cgagagcctg tacacgagcc acatctggat 500  
ccccagcagc tgggtgctac tactgaagg tcctgagtgt gatgtcactg 550  
atgacatcac ggccactgtg ccatacaacc ttcgtgtcag ggccacattg 600  
ggctcacaga cctcagcctg gagcatcctg aagcatccct ttaatagaaa 650  
ctcaaccatc cttaccogac ctgggatgga gatcaccaaa gatggcttcc 700  
acctggttat tgagctggag gacctggggc ccagtttga gttccttgtg 750  
gcctactgga ggaggagacc tggtgccgag gaacatgtca aaatgggtgag 800  
gagtgggggt attccagtgc acctagaaac catggagcca ggggctgcat 850  
actgtgtgaa ggcccagaca ttcgtgaagg ccattgggag gtacagcgcc 900  
ttcagccaga cagaatgtgt ggaggtgcaa ggagaggcca tccccctggt 950  
actggccctg tttgcctttg ttggcttcat gctgacctt gtggctgtgc 1000

cactgttctgt ctggaaaatg ggccggctgc tccagtactc ctgttgcccc 1050  
 gtggtggtcc tcccagacac cttgaaaata accaattcac cccagaagtt 1100  
 aatcagctgc agaagggagg aggtggatgc ctgtgccacg gctgtgatgt 1150  
 ctctgagga actcctcagg gcctggatct cataggtttg cggaagggcc 1200  
 caggtgaagc cgagaacctg gtctgcatga catggaaacc atgaggggac 1250  
 aagttgtgtt tctgttttcc gccacggaca agggatgaga gaagtaggaa 1300  
 gagcctgttg tctacaagtc tagaagcaac catcagaggc agggtggttt 1350  
 gtctaacaga aactgactg aggcttaggg gatgtgacct ctagactggg 1400  
 ggctgccact tgctggctga gcaaccctgg gaaaagtgc ttcattccctt 1450  
 cggtcctaag ttttctcatc tgtaatgggg gaattaccta cacacctgct 1500  
 aaacacacac acacagagtc tctctctata tatacacacg tacacataaa 1550  
 tacaccagc acttgcaagg ctagaggga actggtgaca ctctacagtc 1600  
 tgactgattc agtgtttctg gagagcagga cataaatgta tgatgagaat 1650  
 gatcaaggac tctacacact gggtggttg gagagccac tttccagaa 1700  
 taatccttga gagaaaagga atcatgggag caatggtgtt gagttcactt 1750  
 caagcccaat gccggtgcag aggggaatgg cttagcgagc tctacagtag 1800  
 gtgacctgga ggaaggtcac agccacactg aaaatgggat gtgcatgaac 1850  
 acggaggatc catgaactac tgtaaagtgt tgacagtgtg tgcacactgc 1900  
 agacagcagg tgaaatgtat gtgtgcaatg cgacgagaat gcagaagtca 1950  
 gtaacatgtg catgtttgtt gtgtccttt tttctgttg taaagtacag 2000  
 aattcagcaa ataaaaaggg ccaccctggc caaaagcggg aaaaaaaaaa 2050  
 aaaaaa 2056

<210> 352

<211> 311

<212> PRT

<213> Homo sapiens

<400> 352

Met	Gln	Thr	Phe	Thr	Met	Val	Leu	Glu	Glu	Ile	Trp	Thr	Ser	Leu
1				5					10					15

Phe	Met	Trp	Phe	Phe	Tyr	Ala	Leu	Ile	Pro	Cys	Leu	Leu	Thr	Asp
			20					25						30



Glu Val Ala Ile Leu Pro Ala Pro Gln Asn Leu Ser Val Leu Ser	35	40	45
Thr Asn Met Lys His Leu Leu Met Trp Ser Pro Val Ile Ala Pro	50	55	60
Gly Glu Thr Val Tyr Tyr Ser Val Glu Tyr Gln Gly Glu Tyr Glu	65	70	75
Ser Leu Tyr Thr Ser His Ile Trp Ile Pro Ser Ser Trp Cys Ser	80	85	90
Leu Thr Glu Gly Pro Glu Cys Asp Val Thr Asp Asp Ile Thr Ala	95	100	105
Thr Val Pro Tyr Asn Leu Arg Val Arg Ala Thr Leu Gly Ser Gln	110	115	120
Thr Ser Ala Trp Ser Ile Leu Lys His Pro Phe Asn Arg Asn Ser	125	130	135
Thr Ile Leu Thr Arg Pro Gly Met Glu Ile Thr Lys Asp Gly Phe	140	145	150
His Leu Val Ile Glu Leu Glu Asp Leu Gly Pro Gln Phe Glu Phe	155	160	165
Leu Val Ala Tyr Trp Arg Arg Glu Pro Gly Ala Glu Glu His Val	170	175	180
Lys Met Val Arg Ser Gly Gly Ile Pro Val His Leu Glu Thr Met	185	190	195
Glu Pro Gly Ala Ala Tyr Cys Val Lys Ala Gln Thr Phe Val Lys	200	205	210
Ala Ile Gly Arg Tyr Ser Ala Phe Ser Gln Thr Glu Cys Val Glu	215	220	225
Val Gln Gly Glu Ala Ile Pro Leu Val Leu Ala Leu Phe Ala Phe	230	235	240
Val Gly Phe Met Leu Ile Leu Val Val Val Pro Leu Phe Val Trp	245	250	255
Lys Met Gly Arg Leu Leu Gln Tyr Ser Cys Cys Pro Val Val Val	260	265	270
Leu Pro Asp Thr Leu Lys Ile Thr Asn Ser Pro Gln Lys Leu Ile	275	280	285
Ser Cys Arg Arg Glu Glu Val Asp Ala Cys Ala Thr Ala Val Met	290	295	300
Ser Pro Glu Glu Leu Leu Arg Ala Trp Ile Ser	305	310	

<210> 353  
<211> 864  
<212> DNA  
<213> Homo sapiens

<220>  
<221> unsure  
<222> 654, 711, 748, 827  
<223> unknown base

<400> 353  
tcctgctgat gcacatctgg gtttggcaaa aggaggttgc ttcgagccgc 50  
cctttctagc ttctggccg gctctagaac aattcaggct tcgctgcgac 100  
tagacctcag ctccaacata tgcattctga agaaagatgg ctgagatgac 150  
agaatgcttt attttgaaa gaaacaatgt tctaggtcaa actgagtcta 200  
ccaaatgcag actttcacaa tggttctaga agaaatctgg acaagtcttt 250  
tcatgtggtt tttctacgca ttgattccat gtttgctcac agatgaagtg 300  
gccattctgc ctgcccctca gaacctctct gtactctcaa ccaacatgaa 350  
gcatctcttg atgtggagcc cagtgatcgc gcctggagaa acagtgtact 400  
attctgtcga ataccagggg gagtacgaga gcctgtacac gagccacatc 450  
tggatcccca gcagctgggt ctcactcact gaaggtcctg agtgtgatgt 500  
cactgatgac atcacggcca ctgtgccata caacctttgt gtcagggcca 550  
cattgggctc acagacctca gcctggagca tcctgaagca tccctttaat 600  
agaaactcaa ccatccttac ccgacctggg atggagatca ccaaagatgg 650  
cttncacctg gttattgagc tggaggacct ggggccccag tttgagttcc 700  
ttgtggccta ntggaggagg ggcgaacccc ttgcggcgca aggggttngc 750  
gaaccccttg cggccgctgg ggtatctctc gagaaaagag aggcccaata 800  
tgaccacat actcaatatg gacgaantgc tattgtccac ctgtttgagt 850  
ggcgctgggt tgat 864

<210> 354  
<211> 23  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 354  
aggcttcgct gcgactagac ctc 23

<210> 355  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 355  
ccaggtcggg taaggatggt tgag 24

<210> 356  
<211> 50  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 356  
tttctacgca ttgattccat gtttgctcac agatgaagtg gccattctgc 50

<210> 357  
<211> 1670  
<212> DNA  
<213> Homo sapiens

<400> 357  
cccacgcgtc cgcccacgcg tccgaggagc aagagagaag agagactgaa 50  
acaggagagaa gaggcaggag aggaggaggt ggggagagca cgaagctgga 100  
ggccgacact gagggagggc gggaggaggt gaagaaggag agaggggaga 150  
agaggcagga gctggaaagg agagaggag gagggaggag agatgcggga 200  
tgagagacctg gagttaggtg gcttgggaga gcttaatgaa aagagaacgg 250  
agaggaggtg tgggttagga accaagaggt agccctgtgg gcagcagaag 300  
gctgagagga gtaggaagat caggagctag agggagactg gagggttccg 350  
ggaaaagagc agaggaaaga ggaaagacac agagagacgg gagagagaag 400  
aagagtgggt ttgaagggcg gatctcagtc cctggctgct ttggcatttg 450  
gggaactggg actccctgtg gggaggagag gaaagctgga agtcctggag 500  
ggacagggtc ccagaaggag ggacagagg agctgagaga ggggggcagg 550  
gcgttgggca ggggtccctc ggaggcctcc tggggatggg ggctgcagct 600  
cgtctgagcg cccctcgagc gctggtactc tgggctgcac tgggggcagc 650  
agctcacatc ggaccagcac ctgaccccgaggactggtgg agctacaagg 700

ataatctcca gggaaacttc gtgccagggc ctcctttctg gggcctgggtg 750  
 aatgcagcgt ggagtctgtg tgctgtgggg aagcggcaga gccccgtgga 800  
 tgtggagctg aagaggggttc tttatgaccc ctttctgccc ccattaaggc 850  
 tcagcactgg aggagagaag ctccggggaa ccttgtacaa caccggccga 900  
 catgtctcct tcctgcctgc accccgacct gtggtcaatg tgtctggagg 950  
 tccccctcct tacagccacc gactcagtga actgcggctg ctgtttggag 1000  
 ctgcgcagcg agccggctcg gaacatcaga tcaaccacca gggcttctct 1050  
 gctgaggtgc agctcattca cttcaaccag gaactctacg ggaatttcag 1100  
 cgctgcctcc cgcgggccca atggcctggc cattctcagc ctctttgtca 1150  
 acgttgccag tacctctaac ccattcctca gtcgcctcct taaccgagac 1200  
 accatcactc gcatctccta caagaatgat gcctactttc ttcaagacct 1250  
 gagcctggag ctctgtttcc ctgaatcctt cggcttcac acctatcagg 1300  
 gctctctcag caccgcccc tgctccgaga ctgtcacctg gatcctcatt 1350  
 gaccgggccc tcaatatcac ctcccttcag atgcactccc tgagactcct 1400  
 gagccagaat cctccatctc agatcttcca gagcctcagc ggtaacagcc 1450  
 gggccctgca gcccttggcc cacagggcac tgaggggcaa cagggacccc 1500  
 cggcaccgag agaggcgctg ccgaggcccc aactaccgcc tgcatgtgga 1550  
 tgggtgtcccc catggtcgct gagactcccc ttcgaggatt gcaccgccc 1600  
 gtcctaagcc tccccacaag gcgaggggag ttaccocctaa aacaaagcta 1650  
 ttaaagggac agaatactta 1670

<210> 358

<211> 328

<212> PRT

<213> Homo sapiens

<400> 358

Met	Gly	Ala	Ala	Ala	Arg	Leu	Ser	Ala	Pro	Arg	Ala	Leu	Val	Leu
1					5				10					15

Trp	Ala	Ala	Leu	Gly	Ala	Ala	Ala	His	Ile	Gly	Pro	Ala	Pro	Asp
				20					25					30

Pro	Glu	Asp	Trp	Trp	Ser	Tyr	Lys	Asp	Asn	Leu	Gln	Gly	Asn	Phe
				35					40					45

Val	Pro	Gly	Pro	Pro	Phe	Trp	Gly	Leu	Val	Asn	Ala	Ala	Trp	Ser
				50					55					60

Leu	Cys	Ala	Val	Gly	Lys	Arg	Gln	Ser	Pro	Val	Asp	Val	Glu	Leu	65	70	75
Lys	Arg	Val	Leu	Tyr	Asp	Pro	Phe	Leu	Pro	Pro	Leu	Arg	Leu	Ser	80	85	90
Thr	Gly	Gly	Glu	Lys	Leu	Arg	Gly	Thr	Leu	Tyr	Asn	Thr	Gly	Arg	95	100	105
His	Val	Ser	Phe	Leu	Pro	Ala	Pro	Arg	Pro	Val	Val	Asn	Val	Ser	110	115	120
Gly	Gly	Pro	Leu	Leu	Tyr	Ser	His	Arg	Leu	Ser	Glu	Leu	Arg	Leu	125	130	135
Leu	Phe	Gly	Ala	Arg	Asp	Gly	Ala	Gly	Ser	Glu	His	Gln	Ile	Asn	140	145	150
His	Gln	Gly	Phe	Ser	Ala	Glu	Val	Gln	Leu	Ile	His	Phe	Asn	Gln	155	160	165
Glu	Leu	Tyr	Gly	Asn	Phe	Ser	Ala	Ala	Ser	Arg	Gly	Pro	Asn	Gly	170	175	180
Leu	Ala	Ile	Leu	Ser	Leu	Phe	Val	Asn	Val	Ala	Ser	Thr	Ser	Asn	185	190	195
Pro	Phe	Leu	Ser	Arg	Leu	Leu	Asn	Arg	Asp	Thr	Ile	Thr	Arg	Ile	200	205	210
Ser	Tyr	Lys	Asn	Asp	Ala	Tyr	Phe	Leu	Gln	Asp	Leu	Ser	Leu	Glu	215	220	225
Leu	Leu	Phe	Pro	Glu	Ser	Phe	Gly	Phe	Ile	Thr	Tyr	Gln	Gly	Ser	230	235	240
Leu	Ser	Thr	Pro	Pro	Cys	Ser	Glu	Thr	Val	Thr	Trp	Ile	Leu	Ile	245	250	255
Asp	Arg	Ala	Leu	Asn	Ile	Thr	Ser	Leu	Gln	Met	His	Ser	Leu	Arg	260	265	270
Leu	Leu	Ser	Gln	Asn	Pro	Pro	Ser	Gln	Ile	Phe	Gln	Ser	Leu	Ser	275	280	285
Gly	Asn	Ser	Arg	Pro	Leu	Gln	Pro	Leu	Ala	His	Arg	Ala	Leu	Arg	290	295	300
Gly	Asn	Arg	Asp	Pro	Arg	His	Pro	Glu	Arg	Arg	Cys	Arg	Gly	Pro	305	310	315
Asn	Tyr	Arg	Leu	His	Val	Asp	Gly	Val	Pro	His	Gly	Arg			320	325	

<210> 359

<211> 24

<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 359  
tctgctgagg tgcagctcat tcac 24

<210> 360  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 360  
gaggctctgg aagatctgag atgg 24

<210> 361  
<211> 50  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 361  
gcctctttgt caacgttgcc agtacctcta acccattcct cagtcgcctc 50

<210> 362  
<211> 3038  
<212> DNA  
<213> Homo sapiens

<400> 362  
ggcgccctggt tctgcgcgta ctggctgtac ggagcaggag caagaggctc 50  
ccgccagcct ccgccgccga gcctcggttcg tgtccccgcc cctcgctcct 100  
gcagctactg ctcagaaacg ctggggcgcc caccctggca gactaacgaa 150  
gcagctccct tcccaccca actgcaggtc taattttgga cgctttgcct 200  
gccatttctt ccaggttgag ggagccgcag aggcggaggc tcgcgtattc 250  
ctgcagtcag caccacgtc gccccggac gctcgggtgct caggcccttc 300  
gcgagcgggg ctctccgtct gcggtccctt gtgaaggctc tgggcggctg 350  
cagaggccgg ccgtccggtt tggctcacct ctcccaggaa acttcacact 400  
ggagagccaa aaggagtgga agagcctgtc ttggagattt tcttggggaa 450  
atcctgaggt cattcattat gaagtgtacc gcgcgggagt ggctcagagt 500

aaccacagtg ctgttcatgg ctagagcaat tccagccatg gtggttccca 550  
atgccacttt attggagaaa cttttggaaa aatacatgga tgaggatggt 600  
gagtgggtgga tagccaaaca acgagggaaa agggccatca cagacaatga 650  
catgcagagt attttggacc ttcataataa attacgaagt cagggtgtatc 700  
caacagcctc taatatggag tatatgacat gggatgtaga gctggaaaga 750  
tctgcagaat cctgggctga aagttgcttg tgggaacatg gacctgcaag 800  
cttgcttcca tcaattggac agaatttggg agcacactgg ggaagatata 850  
ggcccccgac gtttcatgta caatcgtggt atgatgaagt gaaagacttt 900  
agctacccat atgaacatga atgcaacca tattgtccat tcagggtgttc 950  
tggccctgta tgtacacatt atacacaggt cgtgtgggca actagtaaca 1000  
gaatcgggttg tgccattaat ttgtgtcata acatgaacat ctgggggcag 1050  
atatggccca aagctgtcta cctgggtgtgc aattactccc caaagggaaa 1100  
ctggtggggc catgcccctt acaaacatgg gcggccctgt tctgcttgcc 1150  
cacctagttt tggagggggc tgtagagaaa atctgtgcta caaagaagg 1200  
tcagacaggt attatcccc tcgagaagag gaaacaaatg aaatagaacg 1250  
acagcagtca caagtccatg acaccatgt ccggacaaga tcagatgata 1300  
gtagcagaaa tgaagtcata agcgcacagc aaatgtcca aattgtttct 1350  
tgtgaagtaa gattaagaga tcagtgc aaa ggaacaacct gcaataggta 1400  
cgaatgtcct gctggctgtt tggatagtaa agctaaagtt attggcagt 1450  
tacattatga aatgcaatcc agcatctgta gagctgcaat tcattatggt 1500  
ataatagaca atgatggtg ctgggtagat atcactagac aaggaagaaa 1550  
gcattatttc atcaagtcca atagaaatgg tattcaaaca attggcaa 1600  
atcagtctgc taattccttc acagtctcta aagtaacagt tcaggctgtg 1650  
acttgtgaaa caactgtgga acagctctgt ccatttcata agcctgcttc 1700  
acattgccca agagtatact gtcctcgtaa ctgtatgcaa gcaaattccac 1750  
attatgctcg tgtaattgga actcgagttt attctgatct gtccagtatc 1800  
tgcagagcag cagtacatgc tggagtgggt cgaaatcacg gtggttatgt 1850  
tgatgtaatg cctgtggaca aaagaaagac ctacattgct tcttttcaga 1900  
atggaatctt ctcagaaagt ttacagaatc ctccaggagg aaaggcattc 1950

agagtgtttg ctgttgtgtg aaactgaata cttggaagag gaccataaag 2000  
 actattccaa atgcaatatt tctgaatttt gtataaaact gtaacattac 2050  
 tgtacagagt acatcaacta ttttcagccc aaaaagggtgc caaatgeata 2100  
 taaatcttga taaacaaagt ctataaaata aaacatggga cattagcttt 2150  
 gggaaaagta atgaaaatat aatggtttta gaaatcctgt gttaaatatt 2200  
 gctatatatt cttagcagtt atttctacag ttaattacat agtcatgatt 2250  
 gttctacgtt tcatatatta tatggtgctt tgtatatgcc actaataaaa 2300  
 tgaatctaaa cattgaatgt gaatggccct cagaaaatca tctagtgcatt 2350  
 ttaaaaataa tcgactctaa aactgaaaga aaccttatca catTTTTCCC 2400  
 agttcaatgc tatgccatta ccaactccaa ataatctcaa ataattttcc 2450  
 acttaataac tgtaaagttt ttttctgtta atttaggcatt atagaatatt 2500  
 aaattctgat attgcacttc ttattttata taaaataatc ctttaatatc 2550  
 caaatgaatc tggtaaaatg tttgattcct tgggaatggc cttaaaaata 2600  
 aatgtaataa agtcagagtg gtggtatgaa aacattccta gtgatcatgt 2650  
 agtaaatgta ggggttaagca tggacagcca gagctttcta tgtactgtta 2700  
 aaattgaggt cacatatatt cttttgtatc ctggcaaata ctctgcagg 2750  
 ccaggaagta taatagcaaa aagttgaaca aagatgaact aatgtattac 2800  
 attaccattg ccaactgattt tttttaaatg gtaaatgacc ttgtatataa 2850  
 atattgccat atcatggtag ctataatggg gatatatattg tttctatgaa 2900  
 aaatgtattg tgctttgata ctaaaaatct gtaaaatggt agttttggta 2950  
 attttttttc tgctgggtgga ttacatatt aaattttttc tgctgggtgga 3000  
 taaacattaa aattaatcat gtttcaaaaa aaaaaaaaa 3038

<210> 363

<211> 500

<212> PRT

<213> Homo sapiens

<400> 363

Met	Lys	Cys	Thr	Ala	Arg	Glu	Trp	Leu	Arg	Val	Thr	Thr	Val	Leu
1				5				10					15	

Phe	Met	Ala	Arg	Ala	Ile	Pro	Ala	Met	Val	Val	Pro	Asn	Ala	Thr
				20				25					30	



Leu	Leu	Glu	Lys	Leu	Leu	Glu	Lys	Tyr	Met	Asp	Glu	Asp	Gly	Glu
				35					40					45
Trp	Trp	Ile	Ala	Lys	Gln	Arg	Gly	Lys	Arg	Ala	Ile	Thr	Asp	Asn
				50					55					60
Asp	Met	Gln	Ser	Ile	Leu	Asp	Leu	His	Asn	Lys	Leu	Arg	Ser	Gln
				65					70					75
Val	Tyr	Pro	Thr	Ala	Ser	Asn	Met	Glu	Tyr	Met	Thr	Trp	Asp	Val
				80					85					90
Glu	Leu	Glu	Arg	Ser	Ala	Glu	Ser	Trp	Ala	Glu	Ser	Cys	Leu	Trp
				95					100					105
Glu	His	Gly	Pro	Ala	Ser	Leu	Leu	Pro	Ser	Ile	Gly	Gln	Asn	Leu
				110					115					120
Gly	Ala	His	Trp	Gly	Arg	Tyr	Arg	Pro	Pro	Thr	Phe	His	Val	Gln
				125					130					135
Ser	Trp	Tyr	Asp	Glu	Val	Lys	Asp	Phe	Ser	Tyr	Pro	Tyr	Glu	His
				140					145					150
Glu	Cys	Asn	Pro	Tyr	Cys	Pro	Phe	Arg	Cys	Ser	Gly	Pro	Val	Cys
				155					160					165
Thr	His	Tyr	Thr	Gln	Val	Val	Trp	Ala	Thr	Ser	Asn	Arg	Ile	Gly
				170					175					180
Cys	Ala	Ile	Asn	Leu	Cys	His	Asn	Met	Asn	Ile	Trp	Gly	Gln	Ile
				185					190					195
Trp	Pro	Lys	Ala	Val	Tyr	Leu	Val	Cys	Asn	Tyr	Ser	Pro	Lys	Gly
				200					205					210
Asn	Trp	Trp	Gly	His	Ala	Pro	Tyr	Lys	His	Gly	Arg	Pro	Cys	Ser
				215					220					225
Ala	Cys	Pro	Pro	Ser	Phe	Gly	Gly	Gly	Cys	Arg	Glu	Asn	Leu	Cys
				230					235					240
Tyr	Lys	Glu	Gly	Ser	Asp	Arg	Tyr	Tyr	Pro	Pro	Arg	Glu	Glu	Glu
				245					250					255
Thr	Asn	Glu	Ile	Glu	Arg	Gln	Gln	Ser	Gln	Val	His	Asp	Thr	His
				260					265					270
Val	Arg	Thr	Arg	Ser	Asp	Asp	Ser	Ser	Arg	Asn	Glu	Val	Ile	Ser
				275					280					285
Ala	Gln	Gln	Met	Ser	Gln	Ile	Val	Ser	Cys	Glu	Val	Arg	Leu	Arg
				290					295					300
Asp	Gln	Cys	Lys	Gly	Thr	Thr	Cys	Asn	Arg	Tyr	Glu	Cys	Pro	Ala
				305					310					315

Gly Cys Leu Asp Ser Lys Ala Lys Val	Ile Gly Ser Val His Tyr
320	325 330
Glu Met Gln Ser Ser Ile Cys Arg Ala	Ala Ile His Tyr Gly Ile
335	340 345
Ile Asp Asn Asp Gly Gly Trp Val Asp	Ile Thr Arg Gln Gly Arg
350	355 360
Lys His Tyr Phe Ile Lys Ser Asn Arg	Asn Gly Ile Gln Thr Ile
365	370 375
Gly Lys Tyr Gln Ser Ala Asn Ser Phe	Thr Val Ser Lys Val Thr
380	385 390
Val Gln Ala Val Thr Cys Glu Thr Thr	Val Glu Gln Leu Cys Pro
395	400 405
Phe His Lys Pro Ala Ser His Cys Pro	Arg Val Tyr Cys Pro Arg
410	415 420
Asn Cys Met Gln Ala Asn Pro His Tyr	Ala Arg Val Ile Gly Thr
425	430 435
Arg Val Tyr Ser Asp Leu Ser Ser Ile	Cys Arg Ala Ala Val His
440	445 450
Ala Gly Val Val Arg Asn His Gly Gly	Tyr Val Asp Val Met Pro
455	460 465
Val Asp Lys Arg Lys Thr Tyr Ile Ala	Ser Phe Gln Asn Gly Ile
470	475 480
Phe Ser Glu Ser Leu Gln Asn Pro Pro	Gly Gly Lys Ala Phe Arg
485	490 495
Val Phe Ala Val Val	
500	

<210> 364

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 364

ggacagaatt tgggagcaca ctgg 24

<210> 365

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 365  
ccaagagtat actgtcctcg 20

<210> 366  
<211> 25  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 366  
agcacagatt ttctctacag ccccc 25

<210> 367  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 367  
aaccactcca gcatgtactg ctgc 24

<210> 368  
<211> 50  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 368  
ccattcaggt gttctggccc tgtatgtaca cattatacac aggtcgtgtg 50

<210> 369  
<211> 1685  
<212> DNA  
<213> Homo sapiens

<400> 369  
gcggagacaa gcgcagagcg cagcgcacgg ccacagacag ccctgggcat 50  
ccaccgacgg cgcagccgga gccagcagag ccggaaggcg cgccccgggc 100  
agagaaagcc gagcagagct ggggtggcgtc tccggggccgc cgctccgacg 150  
ggccagcgcc ctccccatgt ccctgctccc acgccgcgcc cctccggtca 200  
gcatgaggct cctggcgggc gcgctgctcc tgctgctgct ggcgctgtac 250  
accgcgcgtg tggacgggtc caaatgcaag tgctcccgga agggacccaa 300  
gatccgctac agcgacgtga agaagctgga aatgaagcca aagtaccgcg 350

actgcgagga gaagatggtt atcatcacca ccaagagcgt gtccaggtac 400  
 cgaggtcagg agcactgcct gcacccaag ctgcagagca ccaagcgctt 450  
 catcaagtgg tacaacgcct ggaacgagaa gcgcagggtc tacgaagaat 500  
 agggtgaaaa acctcagaag ggaaaactcc aaaccagttg ggagacttgt 550  
 gcaaaggact ttgcagatta aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 600  
 aaaaaaaaaa aaagcctttc tttctcacag gcataagaca caaattatat 650  
 attgttatga agcacttttt accaacggtc agtttttaca ttttatagct 700  
 gcgtgcgaaa ggcttcacaga tgggagaccc atctctcttg tgetccagac 750  
 ttcatacacag gctgcttttt atcaaaaagg ggaaaactca tgcctttcct 800  
 ttttaaaaaa tgcttttttg tatttgtcca tacgtcacta tacatctgag 850  
 ctttataagc gcccgaggagg aacaatgagc ttgggtggaca catttcattg 900  
 cagtgttgct ccattcctag cttgggaagc ttccgcttag aggtcctggc 950  
 gcctcggcac agctgccacg ggctctcctg ggcttatggc cggtcacagc 1000  
 ctcaagtgtga ctccacagtg gccctgtag ccgggcaagc aggagcaggt 1050  
 ctctctgcat ctgttctctg aggaactcaa gtttggttgc cagaaaaatg 1100  
 tgettcattc cccctgggtt aatttttaca caccctagga aacatttcca 1150  
 agatcctgtg atggcgagac aaatgatcct taaagaaggt gtggggctctt 1200  
 tccaacctg aggatttctg aaaggttcac aggttcaata tttaatgctt 1250  
 cagaagcatg tgaggttccc aacactgtca gcaaaaacct taggagaaaa 1300  
 cttaaaaaata tatgaatata tgcgcaatac acagctacag acacacattc 1350  
 tgttgacaag ggaaaacctt caaagcatgt ttctttccct caccacaaca 1400  
 gaacatgcag tactaaagca atatatttgt gattcccat gtaattcttc 1450  
 aatgtttaaac agtgcagtcc tctttcgaaa gctaagatga ccatgcgccc 1500  
 tttcctctgt acatatacc ttaagaacgc cccctccaca cactgcccc 1550  
 cagtatatgc cgcattgtac tgctgtgtta tatgctatgt acatgtcaga 1600  
 aaccattagc attgcatgca ggtttcatat tctttotaag atggaaagta 1650  
 ataaaatata tttgaaatgt aaaaaaaaaa aaaaa 1685

<210> 370  
 <211> 111  
 <212> PRT

<213> Homo sapiens

<400> 370

Met	Ser	Leu	Leu	Pro	Arg	Arg	Ala	Pro	Pro	Val	Ser	Met	Arg	Leu	
1				5					10					15	
Leu	Ala	Ala	Ala	Leu	Leu	Leu	Leu	Leu	Leu	Ala	Leu	Tyr	Thr	Ala	
				20					25					30	
Arg	Val	Asp	Gly	Ser	Lys	Cys	Lys	Cys	Ser	Arg	Lys	Gly	Pro	Lys	
				35					40					45	
Ile	Arg	Tyr	Ser	Asp	Val	Lys	Lys	Leu	Glu	Met	Lys	Pro	Lys	Tyr	
				50					55					60	
Pro	His	Cys	Glu	Glu	Lys	Met	Val	Ile	Ile	Thr	Thr	Lys	Ser	Val	
				65					70					75	
Ser	Arg	Tyr	Arg	Gly	Gln	Glu	His	Cys	Leu	His	Pro	Lys	Leu	Gln	
				80					85					90	
Ser	Thr	Lys	Arg	Phe	Ile	Lys	Trp	Tyr	Asn	Ala	Trp	Asn	Glu	Lys	
				95					100					105	
Arg	Arg	Val	Tyr	Glu	Glu										
				110											

<210> 371

<211> 22

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 371

cagcgccctc cccatgtccc tg 22

<210> 372

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 372

tcccaactgg tttggagttt tccc 24

<210> 373

<211> 45

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 373

ctccggtcag catgaggctc ctggcggccg ctgctcctgc tgctg 45

<210> 374

<211> 3113

<212> DNA

<213> Homo sapiens

<400> 374

gccccaggga ctgctatggc ttcccttggt gttcaccccg gtctgcgtca 50

tgttaaactc caatgtcctc ctgtgggttaa ctgctcttgc catcaagttc 100

accctcattg acagccaagc acagtatcca gttgtcaaca caaattatgg 150

caaaatccgg ggcctaagaa caccgttacc caatgagatc ttgggtccag 200

tggagcagta cttaggggtc ccctatgcct cccccccac tggagagagg 250

cggtttcagc cccagaacc cccgtcctcc tggactggca tccgaaatac 300

tactcagttt gctgctgtgt gccccagca cctggatgag agatccttac 350

tgcatgacat gctgcccatac tggtttaccg ccaatttgga tactttgatg 400

acctatgttc aagatcaaaa tgaagactgc ctttacttaa acatctacgt 450

gcccacggaa gatggagcca acacaaagaa aaacgcagat gatataacga 500

gtaatgaccg tgggtgaagac gaagatattc atgatcagaa cagtaagaag 550

cccgtcatgg tctatatcca tgggggatct tacatggagg gcaccggcaa 600

catgattgac ggcagcattt tggcaagcta cggaaacgtc atcgtgatca 650

ccattaacta ccgtctggga atactagggt ttttaagtac cggtgaccag 700

gcagcaaaag gcaactatgg gctcctggat cagattcaag cactgcggtg 750

gattgaggag aatgtgggag cctttggcgg ggaccccaag agagtgacca 800

tctttggctc gggggctggg gcctcctgtg tcagcctgtt gaccctgtcc 850

cactactcag aaggctctct ccagaaggcc atcattcaga gcggcaccgc 900

cctgtccagc tgggcagtga actaccagcc ggccaagtac actcggatat 950

tggcagacaa ggtcggctgc aacatgctgg acaccacgga catggtagaa 1000

tgcttgcgga acaagaacta caaggagctc atccagcaga ccatcacccc 1050

ggccacctac cacatagcct tcgggccggg gatcgacggc gacgtcatcc 1100

cagacgaccc ccagatcctg atggagcaag gcgagttcct caactacgac 1150

atcatgctgg gcgtcaacca aggggaaggc ctgaagttcg tggacggcat 1200

cgtaggataac gaggacggtg tgacgcccaa cgactttgac ttctccgtgt 1250  
ccaacttcgt ggacaacctt tacggctacc ctgaaggga agacactttg 1300  
cgggagacta tcaagttcat gtacacagac tgggccgata aggaaaaccc 1350  
ggagacgagg cggaaccc tggtagctct ctttactgac caccagtggg 1400  
tgccccccgc cgtggccgcc gacctgcacg cgcagtacgg ctccccacc 1450  
tactttctatg ctttctatca tcaactgcaa agcgaaatga agcccagctg 1500  
ggcagattcg gcccatggtg atgagggtccc ctatgtcttc ggcattccca 1550  
tgatcgggtcc caccgagctc ttcagttgta acttttccaa gaacgacgtc 1600  
atgctcagcg ccgtgggtcat gacctactgg acgaacttcg ccaaaactgg 1650  
tgatccaaat caaccagttc ctcaggatac caagttcatt cacacaaaac 1700  
ccaaccgctt tgaagaagtg gcctggtcca agtataatcc caaagaccag 1750  
ctctatctgc atattggctt gaaaccaga gtgagagatc actaccgggc 1800  
aacgaaagtg gctttctggt tggaaactcg tctcatttg cacaacttga 1850  
acgagatatt ccagtatgtt tcaacaacca caaagggtcc tccaccagac 1900  
atgacatcat ttccctatgg caccggcgga tctcccgcca agatatggcc 1950  
aaccaccaa cgcccagcaa tcaactctgc caacaatccc aaacactcta 2000  
aggaccctca caaacaggg cctgaggaca caactgtcct cattgaaacc 2050  
aaacgagatt attccaccga attaagtgtc accattgccc tcggggcgctc 2100  
gctcctcttc ctcaacatct tagcttttgc ggcgctgtac tacaaaaagg 2150  
acaagaggcg ccatgagact cacaggcgcc ccagtcccca gagaaacacc 2200  
acaaatgata tcgctcacat ccagaacgaa gagatcatgt ctctgcagat 2250  
gaagcagctg gaacacgac acgagtgtga gtcgctgcag gcacacgaca 2300  
cactgaggct cactgcccg ccagactaca ccctcacgtc ggcgggtcg 2350  
ccagatgaca tcccacttat gacgccaac accatcacca tgattccaaa 2400  
cacactgacg gggatgcagc ctttgcacac tttaaacacc ttcagtggag 2450  
gacaaaacag tacaaattta cccacggac attccaccac tagagtatag 2500  
ctttgcccta ttcccttcc tatectctg ccctaccgc tcagcaacat 2550  
agaagaggga aggaagaga gaaggaaaga gagagagaaa gaaagtctcc 2600  
agaccaggaa tgtttttgc ccaactgactt aagacaaaa tgcaaaaagg 2650

cagtcacccc atccccggcag acccttatcg ttggtgtttt ccagtattac 2700  
 aagatcaact tctgaccctg tgaaatgtga gaagtacaca tttctgttaa 2750  
 aataactgct ttaagatctc taccactcca atcaatgttt agtgtgatag 2800  
 gacatcacca tttcaaggcc ccgggtgttt ccaacgtcat ggaagcagct 2850  
 gacacttctg aaactcagcc aaggacactt gatatttttt aattacaatg 2900  
 gaagtttaaa catttctttc tgtgccacac aatggatggc tctccttaag 2950  
 tgaagaaaga gtcaatgaga ttttgcccag cacatggagc tgtaatccag 3000  
 agagaaggaa acgtagaaat ttattattaa aagaatggac tgtgcagcga 3050  
 aatctgtacg gttctgtgca aagaggtggt ttgccagcct gaactatatt 3100  
 taagagactt tgt 3113

<210> 375

<211> 816

<212> PRT

<213> Homo sapiens

<400> 375

Met	Leu	Asn	Ser	Asn	Val	Leu	Leu	Trp	Leu	Thr	Ala	Leu	Ala	Ile
1				5					10					15
Lys	Phe	Thr	Leu	Ile	Asp	Ser	Gln	Ala	Gln	Tyr	Pro	Val	Val	Asn
				20					25					30
Thr	Asn	Tyr	Gly	Lys	Ile	Arg	Gly	Leu	Arg	Thr	Pro	Leu	Pro	Asn
				35					40					45
Glu	Ile	Leu	Gly	Pro	Val	Glu	Gln	Tyr	Leu	Gly	Val	Pro	Tyr	Ala
				50					55					60
Ser	Pro	Pro	Thr	Gly	Glu	Arg	Arg	Phe	Gln	Pro	Pro	Glu	Pro	Pro
				65					70					75
Ser	Ser	Trp	Thr	Gly	Ile	Arg	Asn	Thr	Thr	Gln	Phe	Ala	Ala	Val
				80					85					90
Cys	Pro	Gln	His	Leu	Asp	Glu	Arg	Ser	Leu	Leu	His	Asp	Met	Leu
				95					100					105
Pro	Ile	Trp	Phe	Thr	Ala	Asn	Leu	Asp	Thr	Leu	Met	Thr	Tyr	Val
				110					115					120
Gln	Asp	Gln	Asn	Glu	Asp	Cys	Leu	Tyr	Leu	Asn	Ile	Tyr	Val	Pro
				125					130					135
Thr	Glu	Asp	Gly	Ala	Asn	Thr	Lys	Lys	Asn	Ala	Asp	Asp	Ile	Thr
				140					145					150



Ser Asn Asp Arg Gly Glu Asp Glu Asp	Ile His Asp Gln Asn Ser
155	160 165
Lys Lys Pro Val Met Val Tyr Ile His	Gly Gly Ser Tyr Met Glu
170	175 180
Gly Thr Gly Asn Met Ile Asp Gly Ser	Ile Leu Ala Ser Tyr Gly
185	190 195
Asn Val Ile Val Ile Thr Ile Asn Tyr	Arg Leu Gly Ile Leu Gly
200	205 210
Phe Leu Ser Thr Gly Asp Gln Ala Ala	Lys Gly Asn Tyr Gly Leu
215	220 225
Leu Asp Gln Ile Gln Ala Leu Arg Trp	Ile Glu Glu Asn Val Gly
230	235 240
Ala Phe Gly Gly Asp Pro Lys Arg Val	Thr Ile Phe Gly Ser Gly
245	250 255
Ala Gly Ala Ser Cys Val Ser Leu Leu	Thr Leu Ser His Tyr Ser
260	265 270
Glu Gly Leu Phe Gln Lys Ala Ile Ile	Gln Ser Gly Thr Ala Leu
275	280 285
Ser Ser Trp Ala Val Asn Tyr Gln Pro	Ala Lys Tyr Thr Arg Ile
290	295 300
Leu Ala Asp Lys Val Gly Cys Asn Met	Leu Asp Thr Thr Asp Met
305	310 315
Val Glu Cys Leu Arg Asn Lys Asn Tyr	Lys Glu Leu Ile Gln Gln
320	325 330
Thr Ile Thr Pro Ala Thr Tyr His Ile	Ala Phe Gly Pro Val Ile
335	340 345
Asp Gly Asp Val Ile Pro Asp Asp Pro	Gln Ile Leu Met Glu Gln
350	355 360
Gly Glu Phe Leu Asn Tyr Asp Ile Met	Leu Gly Val Asn Gln Gly
365	370 375
Glu Gly Leu Lys Phe Val Asp Gly Ile	Val Asp Asn Glu Asp Gly
380	385 390
Val Thr Pro Asn Asp Phe Asp Phe Ser	Val Ser Asn Phe Val Asp
395	400 405
Asn Leu Tyr Gly Tyr Pro Glu Gly Lys	Asp Thr Leu Arg Glu Thr
410	415 420
Ile Lys Phe Met Tyr Thr Asp Trp Ala	Asp Lys Glu Asn Pro Glu
425	430 435

Thr Arg Arg Lys Thr Leu Val Ala Leu Phe Thr Asp His Gln Trp	440	445	450
Val Ala Pro Ala Val Ala Ala Asp Leu His Ala Gln Tyr Gly Ser	455	460	465
Pro Thr Tyr Phe Tyr Ala Phe Tyr His His Cys Gln Ser Glu Met	470	475	480
Lys Pro Ser Trp Ala Asp Ser Ala His Gly Asp Glu Val Pro Tyr	485	490	495
Val Phe Gly Ile Pro Met Ile Gly Pro Thr Glu Leu Phe Ser Cys	500	505	510
Asn Phe Ser Lys Asn Asp Val Met Leu Ser Ala Val Val Met Thr	515	520	525
Tyr Trp Thr Asn Phe Ala Lys Thr Gly Asp Pro Asn Gln Pro Val	530	535	540
Pro Gln Asp Thr Lys Phe Ile His Thr Lys Pro Asn Arg Phe Glu	545	550	555
Glu Val Ala Trp Ser Lys Tyr Asn Pro Lys Asp Gln Leu Tyr Leu	560	565	570
His Ile Gly Leu Lys Pro Arg Val Arg Asp His Tyr Arg Ala Thr	575	580	585
Lys Val Ala Phe Trp Leu Glu Leu Val Pro His Leu His Asn Leu	590	595	600
Asn Glu Ile Phe Gln Tyr Val Ser Thr Thr Thr Lys Val Pro Pro	605	610	615
Pro Asp Met Thr Ser Phe Pro Tyr Gly Thr Arg Arg Ser Pro Ala	620	625	630
Lys Ile Trp Pro Thr Thr Lys Arg Pro Ala Ile Thr Pro Ala Asn	635	640	645
Asn Pro Lys His Ser Lys Asp Pro His Lys Thr Gly Pro Glu Asp	650	655	660
Thr Thr Val Leu Ile Glu Thr Lys Arg Asp Tyr Ser Thr Glu Leu	665	670	675
Ser Val Thr Ile Ala Val Gly Ala Ser Leu Leu Phe Leu Asn Ile	680	685	690
Leu Ala Phe Ala Ala Leu Tyr Tyr Lys Lys Asp Lys Arg Arg His	695	700	705
Glu Thr His Arg Arg Pro Ser Pro Gln Arg Asn Thr Thr Asn Asp	710	715	720

Ile	Ala	His	Ile	Gln	Asn	Glu	Glu	Ile	Met	Ser	Leu	Gln	Met	Lys
				725					730					735
Gln	Leu	Glu	His	Asp	His	Glu	Cys	Glu	Ser	Leu	Gln	Ala	His	Asp
				740					745					750
Thr	Leu	Arg	Leu	Thr	Cys	Pro	Pro	Asp	Tyr	Thr	Leu	Thr	Leu	Arg
				755					760					765
Arg	Ser	Pro	Asp	Asp	Ile	Pro	Leu	Met	Thr	Pro	Asn	Thr	Ile	Thr
				770					775					780
Met	Ile	Pro	Asn	Thr	Leu	Thr	Gly	Met	Gln	Pro	Leu	His	Thr	Phe
				785					790					795
Asn	Thr	Phe	Ser	Gly	Gly	Gln	Asn	Ser	Thr	Asn	Leu	Pro	His	Gly
				800					805					810
His	Ser	Thr	Thr	Arg	Val									
				815										

<210> 376

<211> 25

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 376

ggcaagctac ggaaacgtca tcgtg 25

<210> 377

<211> 25

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 377

aacccccgag ccaaaagatg gtcac 25

<210> 378

<211> 47

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 378

gtaccggtga ccaggcagca aaaggcaact atgggctcct ggatcag 47

<210> 379

<211> 2461

<212> DNA

<213> Homo sapiens

<400> 379

gggaaagatg gcggcgactc tgggacccct tgggtcgtgg cagcagtggc 50  
ggcgatgttt gtcggctcgg gatgggtcca ggatgttact cttctctctt 100  
ttgttggggc ctgggcaggg gccacagcaa gtcggggcgg gtcaaactgt 150  
cgagtacttg aaacgggagc actcgtgtc gaagccctac cagggtgtgg 200  
gcacaggcag ttctcactg tggaaatctga tgggcaatgc catggtgatg 250  
accagttata tccgccttac ccagatatg caaagtaaac aggggtgcctt 300  
gtggaaccgg gtgccatgtt tcttgagaga ctgggagttg cagggtgcact 350  
tcaaaatcca tggacaagga aagaagaatc tgcattggga tggcttggca 400  
atctggtaca caaaggatcg gatgcagcca gggcctgtgt ttggaaacat 450  
ggacaaatct gtggggctgg gaggatctgt agacacctac cccaatgagg 500  
agaagcagca agagcgggta tccccctaca tctcagccat ggtgaacaac 550  
ggctccctca gctatgatca tgagcgggat gggcggccta cagagctggg 600  
aggctgcaca gccattgtcc gcaatcttca ttacgacacc ttctgtgtga 650  
ttcgtctagt caagaggcat ttgacgataa tgatggatat tgatggcaag 700  
catgagtggg gggactgcat tgaagtggcc ggagtcggcc tgccccgcgg 750  
ctactacttc ggcacctcct ccatcactgg ggatctctca gataatcatg 800  
atgtcatttc cttgaagttg tttgaactga cagtggagag aaccccagaa 850  
gaggaaaagc tccatcgaga tgtgttcttg cctcagtgag acaatatgaa 900  
gctgcctgag atgacagctc cactgccgcc cctgagtggc ctggccctct 950  
tctcatcgt ctttttctcc ctggtgtttt ctgtatttgc catagtcatt 1000  
ggatcatatc tctacaacaa atggcaggaa cagagccgaa agcgcttcta 1050  
ctgagccctc ctgctgccac cacttttgtg actgtcacc atgaggtatg 1100  
gaaggagcag gcactggcct gagcatgcag cctggagagt gttcttgtct 1150  
ctagcagctg gttggggact atattctgtc actggagttt tgaatgcagg 1200  
gaccccgcat tcccatggtt gtgcatgggg acatctaact ctggtctggg 1250  
aagccacca cccagggca atgctgctgt gatgtgcctt tccctgcagt 1300  
ccttccatgt gggagcagag gtgtgaagag aatttacgtg gttgtgatgc 1350

caaaatcaca gaacagaatt tcatagccca ggctgccgtg ttgtttgact 1400  
 cagaaggccc ttctacttca gttttgaatc cacaaagaat taaaaactgg 1450  
 taacaccaca ggctttctga ccatccattc gttgggtttt gcatttgacc 1500  
 caaccctctg cctacctgag gagctttctt tggaaaccag gatggaaact 1550  
 tcttccctgc cttaccttcc ttctactcca ttcatgttcc tctctgtgtg 1600  
 caacctgagc tgggaaaggc atttggtatg ctctctgttg gggcctgggg 1650  
 ctgcagaaca cacctgcgtt tcaactggcct tcattaggtg gccctagggg 1700  
 gatggctttc tgctttggat cactgttccc tagcatgggt cttgggtcta 1750  
 ttggcatgtc catggccttc ccaatcaagt ctcttcaggc cctcagttaa 1800  
 gtttggtctaa aggttggtgt aaaaatcaag agaagcctgg aagacatcat 1850  
 ggatgccatg gattagctgt gcaactgacc agctccaggt ttgatcaaac 1900  
 caaaagcaac atttgatcat tggctctgacc atgtggagat gtttctggac 1950  
 ttgctagagc ctgcttagct gcatgttttg tagttacgat ttttggaaac 2000  
 ccactttgag tgctgaaagt gtaaggaagc tttctttctta caccttgggc 2050  
 ttggatattg ccagagaag aaatttggct ttttttttct taatggacaa 2100  
 gagacagttg ctgtttctcat gttccaagtc tgagagcaac agaccctcat 2150  
 catctgtgcc tggaagagtt cactgtcatt gagcagcaca gcctgagtgc 2200  
 tggcctctgt caacccttat tccactgcct tatttgacaa ggggttacat 2250  
 gctgctcacc ttactgcctt gggattaaat cagttacagg ccagagtctc 2300  
 cttggagggc ctggaactct gagtctctct atgaacctct gtagcctaaa 2350  
 tgaaattctt aaaatcaccg atggaaccaa aaaaaaaaaa aaaaaggcg 2400  
 gccgcgactc tagagtcgac ctgcagtagg gataacaggg taataagctt 2450  
 ggccgcatg g 2461

<210> 380

<211> 348

<212> PRT

<213> Homo sapiens

<400> 380

Met	Ala	Ala	Thr	Leu	Gly	Pro	Leu	Gly	Ser	Trp	Gln	Gln	Trp	Arg
1				5					10					15

Arg	Cys	Leu	Ser	Ala	Arg	Asp	Gly	Ser	Arg	Met	Leu	Leu	Leu	Leu
				20					25					30

Leu	Leu	Leu	Gly	Ser	Gly	Gln	Gly	Pro	Gln	Gln	Val	Gly	Ala	Gly		35	40	45
Gln	Thr	Phe	Glu	Tyr	Leu	Lys	Arg	Glu	His	Ser	Leu	Ser	Lys	Pro		50	55	60
Tyr	Gln	Gly	Val	Gly	Thr	Gly	Ser	Ser	Ser	Leu	Trp	Asn	Leu	Met		65	70	75
Gly	Asn	Ala	Met	Val	Met	Thr	Gln	Tyr	Ile	Arg	Leu	Thr	Pro	Asp		80	85	90
Met	Gln	Ser	Lys	Gln	Gly	Ala	Leu	Trp	Asn	Arg	Val	Pro	Cys	Phe		95	100	105
Leu	Arg	Asp	Trp	Glu	Leu	Gln	Val	His	Phe	Lys	Ile	His	Gly	Gln		110	115	120
Gly	Lys	Lys	Asn	Leu	His	Gly	Asp	Gly	Leu	Ala	Ile	Trp	Tyr	Thr		125	130	135
Lys	Asp	Arg	Met	Gln	Pro	Gly	Pro	Val	Phe	Gly	Asn	Met	Asp	Lys		140	145	150
Phe	Val	Gly	Leu	Gly	Val	Phe	Val	Asp	Thr	Tyr	Pro	Asn	Glu	Glu		155	160	165
Lys	Gln	Gln	Glu	Arg	Val	Phe	Pro	Tyr	Ile	Ser	Ala	Met	Val	Asn		170	175	180
Asn	Gly	Ser	Leu	Ser	Tyr	Asp	His	Glu	Arg	Asp	Gly	Arg	Pro	Thr		185	190	195
Glu	Leu	Gly	Gly	Cys	Thr	Ala	Ile	Val	Arg	Asn	Leu	His	Tyr	Asp		200	205	210
Thr	Phe	Leu	Val	Ile	Arg	Tyr	Val	Lys	Arg	His	Leu	Thr	Ile	Met		215	220	225
Met	Asp	Ile	Asp	Gly	Lys	His	Glu	Trp	Arg	Asp	Cys	Ile	Glu	Val		230	235	240
Pro	Gly	Val	Arg	Leu	Pro	Arg	Gly	Tyr	Tyr	Phe	Gly	Thr	Ser	Ser		245	250	255
Ile	Thr	Gly	Asp	Leu	Ser	Asp	Asn	His	Asp	Val	Ile	Ser	Leu	Lys		260	265	270
Leu	Phe	Glu	Leu	Thr	Val	Glu	Arg	Thr	Pro	Glu	Glu	Glu	Lys	Leu		275	280	285
His	Arg	Asp	Val	Phe	Leu	Pro	Ser	Val	Asp	Asn	Met	Lys	Leu	Pro		290	295	300
Glu	Met	Thr	Ala	Pro	Leu	Pro	Pro	Leu	Ser	Gly	Leu	Ala	Leu	Phe		305	310	315

Leu Ile Val Phe Phe Ser Leu Val Phe Ser Val Phe Ala Ile Val  
320 325 330

Ile Gly Ile Ile Leu Tyr Asn Lys Trp Gln Glu Gln Ser Arg Lys  
335 340 345

Arg Phe Tyr

<210> 381

<211> 22

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 381

ccttgggtcg tggcagcagt gg 22

<210> 382

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 382

cactctccag gctgcatgct cagg 24

<210> 383

<211> 45

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 383

gtcaaacgtt cgagtacttg aaacgggagc actcgctgtc gaagc 45

<210> 384

<211> 3150

<212> DNA

<213> Homo sapiens

<400> 384

ccgagccggg cgcgcagcga cggagctggg gccggcctgg gaccatgggc 50

gtgagtgcaa tctacggatc agtctctgat ggtgggtcgt taacctcagt 100

ggggactcca agatttccat gaagaaaatc agttgtcttc attcaagaat 150

tgggggtctgg ctcagaattc ctgcagctgg tgaaaatctg ttttctagaa 200

gaggtttaat taatgcctgc agtctgacat gttcccgatt tgaggtgaaa 250  
ccatgaagag aaaatagaat acttaataat gcttttccgc aaccgcttct 300  
tgctgctgct ggccctggct gcgctgctgg cctttgtgag cctcagcctg 350  
cagttcttcc acctgatccc ggtgtcgact cctaagaatg gaatgagtag 400  
caagagtcga aagagaatca tgcccgaacc tgtgacggag cccctgtga 450  
cagaccccggt ttatgaagct cttttgtact gcaacatccc cagtgtggcc 500  
gagcgcagca tggaagggtca tgcccgcacat cattttaagc tgggtctcagt 550  
gcatgtgttc attcgccacg gagacaggta cccactgtat gtcattccca 600  
aaacaaagcg accagaaatt gactgcactc tgggtggctaa caggaaaccg 650  
tatcacccaa aactggaagc tttcattagt cacatgtcaa aaggatccgg 700  
agcctctttc gaaagccctt tgaactcctt gcctctttac ccaaaccacc 750  
cattgtgtga gatgggagag ctcacacaga caggagttgt gcagcatttg 800  
cagaacggtc agctgctgag ggatatctat ctaaagaaac acaaactcct 850  
gcccaatgat tgggtctgcag accagctcta tttagagacc actgggaaaa 900  
gccggaccct acaaagtggg ctggccctgc tttatggctt tctcccagat 950  
tttgactgga agaagattta tttcaggcac cagccaagtg cgctgttctg 1000  
ctctggaagc tgctattgcc cggttaagaaa ccagtatctg gaaaaggagc 1050  
agcgtcgtca gtacctccta cgtttgaaaa acagccagct ggagaagacc 1100  
tacggggaga tggccaagat cgtggatgtc cccaccaagc agcttagagc 1150  
tgccaacccc atagactcca tgctctgcc aattctgccac aatgtcagct 1200  
ttccctgtac cagaaatggc tgtgttgaca tggagcactt caaggttaatt 1250  
aagacccatc agatcgagga tgaaagggaa agacgggaga agaaattgta 1300  
cttcgggtat tctctcctgg gtgcccaccc catcctgaac caaacatcg 1350  
gccggatgca gcgtgccacc gagggcagga aagaagagct ctttgccctc 1400  
tactctgctc atgatgtcac tctgtcacca gttctcagtg cettgggcct 1450  
ttcagaagcc aggttcccaa ggtttgcagc caggttgac tttgagcttt 1500  
ggcaagacag agaaaagccc agtgaacatt ccgtccggat tctttacaat 1550  
ggcgtcgatg tcacattcca cacctctttc tgccaagacc accacaagcg 1600  
ttctcccaag cccatgtgcc cgcttgaaaa cttgggtccgc tttgtgaaaa 1650



gggacatggt tgtagccctg ggtggcagtg gtacaaatta ttatgatgca 1700  
tgtcacaggg aaggattcta aaaggatatgc agtacagcag tatagaatcc 1750  
atgccaatag agagcatagg gaaaggcca cttctagttt tgtctgttac 1800  
taagggtaga agattattgc tttttaagg ctaaatttg tttgtggaa 1850  
ccacagatgg ttgggggtga acagtaagca cattgctgca atgtggtacg 1900  
tgaattgctt ggtacaaaat ggccagttca cagaggaata gaaggactt 1950  
tatcatagcc agacttgcgt tagaatgcca gaataatata gttcaagacc 2000  
tgaagttgcc aatccaagtt tgcactcttc tggcctgccc catgttacta 2050  
tgtgatggaa ccagcacacc tcaacaaaa tttttttaat cttagacatt 2100  
ttaccttgt ccttgtaag aatttctga agtgatttat ctaaaataaa 2150  
ggttggcaaa cttttctgt aaagggccag attgtaaata tttcagactg 2200  
tgtggaccaa aaggccacat acagtctctg tcataactac tcaactctgt 2250  
ttctgaagca ggaaagccac cacagacagt acataaagga atatgtgtag 2300  
ctgggttccc aggcagaca aaacagatgg tgaccagact tggccctgg 2350  
gctgtagttt gctgaccct catctaaaa ataggctata ctacaattgc 2400  
acttcagca ctttgagaac gagttgaata ccaagaatta ttcaatggtt 2450  
cctccagtaa cttctgctag aaacacagaa tttggtctgt atctgacact 2500  
agaacaaaac ttgagggtaa ataaacattg aattagaatg aatcatagaa 2550  
aactgattag aagaatactt gatgtttatg atgattgtgg tacaagatag 2600  
ttttaagtat gttctaaata tttgtctgct gtagtctatt tgctgtatat 2650  
gctgaaattt ttgtatgcca tttagtattt ttatagttta ggaaaatatt 2700  
ttctaagacc agtttttagat gactcttatt cctgtagtaa tattcaattt 2750  
gctgtacctg cttggtggtt agaaggaggc tagaagatga attcaggcac 2800  
tttcttccaa taaaactaat tatggctcat tcccttgac aagctgtaga 2850  
actggattca tttttaaac attttcatca gtttcaaag gttaaattctg 2900  
attgattttt aaatgcgttt ttggaagaac tttgctatta ggtagtttac 2950  
agatctttat aagggtgtttt atatattaga agcaattata attacatctg 3000  
tgattttctga actaatggtg ctaattcaga gaaatggaaa gtgaaagtga 3050

gattctctgt tgtcatcggc attccaactt tttctctttg tttttgtcca 3100

gtgttgcaatt tgaatatgtc tgtttctata aataaatttt ttaagaataa 3150

<210> 385

<211> 480

<212> PRT

<213> Homo sapiens

<400> 385

Met	Leu	Phe	Arg	Asn	Arg	Phe	Leu	Leu	Leu	Leu	Ala	Leu	Ala	Ala	
1				5					10					15	
Leu	Leu	Ala	Phe	Val	Ser	Leu	Ser	Leu	Gln	Phe	Phe	His	Leu	Ile	
				20					25					30	
Pro	Val	Ser	Thr	Pro	Lys	Asn	Gly	Met	Ser	Ser	Lys	Ser	Arg	Lys	
				35					40					45	
Arg	Ile	Met	Pro	Asp	Pro	Val	Thr	Glu	Pro	Pro	Val	Thr	Asp	Pro	
				50					55					60	
Val	Tyr	Glu	Ala	Leu	Leu	Tyr	Cys	Asn	Ile	Pro	Ser	Val	Ala	Glu	
				65					70					75	
Arg	Ser	Met	Glu	Gly	His	Ala	Pro	His	His	Phe	Lys	Leu	Val	Ser	
				80					85					90	
Val	His	Val	Phe	Ile	Arg	His	Gly	Asp	Arg	Tyr	Pro	Leu	Tyr	Val	
				95					100					105	
Ile	Pro	Lys	Thr	Lys	Arg	Pro	Glu	Ile	Asp	Cys	Thr	Leu	Val	Ala	
				110					115					120	
Asn	Arg	Lys	Pro	Tyr	His	Pro	Lys	Leu	Glu	Ala	Phe	Ile	Ser	His	
				125					130					135	
Met	Ser	Lys	Gly	Ser	Gly	Ala	Ser	Phe	Glu	Ser	Pro	Leu	Asn	Ser	
				140					145					150	
Leu	Pro	Leu	Tyr	Pro	Asn	His	Pro	Leu	Cys	Glu	Met	Gly	Glu	Leu	
				155					160					165	
Thr	Gln	Thr	Gly	Val	Val	Gln	His	Leu	Gln	Asn	Gly	Gln	Leu	Leu	
				170					175					180	
Arg	Asp	Ile	Tyr	Leu	Lys	Lys	His	Lys	Leu	Leu	Pro	Asn	Asp	Trp	
				185					190					195	
Ser	Ala	Asp	Gln	Leu	Tyr	Leu	Glu	Thr	Thr	Gly	Lys	Ser	Arg	Thr	
				200					205					210	
Leu	Gln	Ser	Gly	Leu	Ala	Leu	Leu	Tyr	Gly	Phe	Leu	Pro	Asp	Phe	
				215					220					225	
Asp	Trp	Lys	Lys	Ile	Tyr	Phe	Arg	His	Gln	Pro	Ser	Ala	Leu	Phe	
				230					235					240	

Cys Ser Gly Ser Cys Tyr Cys Pro Val Arg Asn Gln Tyr Leu Glu	245	250	255
Lys Glu Gln Arg Arg Gln Tyr Leu Leu Arg Leu Lys Asn Ser Gln	260	265	270
Leu Glu Lys Thr Tyr Gly Glu Met Ala Lys Ile Val Asp Val Pro	275	280	285
Thr Lys Gln Leu Arg Ala Ala Asn Pro Ile Asp Ser Met Leu Cys	290	295	300
His Phe Cys His Asn Val Ser Phe Pro Cys Thr Arg Asn Gly Cys	305	310	315
Val Asp Met Glu His Phe Lys Val Ile Lys Thr His Gln Ile Glu	320	325	330
Asp Glu Arg Glu Arg Arg Glu Lys Lys Leu Tyr Phe Gly Tyr Ser	335	340	345
Leu Leu Gly Ala His Pro Ile Leu Asn Gln Thr Ile Gly Arg Met	350	355	360
Gln Arg Ala Thr Glu Gly Arg Lys Glu Glu Leu Phe Ala Leu Tyr	365	370	375
Ser Ala His Asp Val Thr Leu Ser Pro Val Leu Ser Ala Leu Gly	380	385	390
Leu Ser Glu Ala Arg Phe Pro Arg Phe Ala Ala Arg Leu Ile Phe	395	400	405
Glu Leu Trp Gln Asp Arg Glu Lys Pro Ser Glu His Ser Val Arg	410	415	420
Ile Leu Tyr Asn Gly Val Asp Val Thr Phe His Thr Ser Phe Cys	425	430	435
Gln Asp His His Lys Arg Ser Pro Lys Pro Met Cys Pro Leu Glu	440	445	450
Asn Leu Val Arg Phe Val Lys Arg Asp Met Phe Val Ala Leu Gly	455	460	465
Gly Ser Gly Thr Asn Tyr Tyr Asp Ala Cys His Arg Glu Gly Phe	470	475	480

<210> 386

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 386  
 ccaagcagct tagagctcca gacc 24

<210> 387  
 <211> 25  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 387  
 ttccctatgc tctgtattgg catgg 25

<210> 388  
 <211> 50  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 388  
 gccacttctg ccacaatgtc agctttccct gtaccagaaa tggctgtgtt 50

<210> 389  
 <211> 3313  
 <212> DNA  
 <213> Homo sapiens

<400> 389  
 aaaaaagctc actaaagttt ctattagagc gaatacggta gatttccatc 50  
 cccttttgaa gaacagtact gtggagctat ttaagagata aaaacgaaat 100  
 atcctttctg ggagttcaag attgtgcagt aattggttag gactctgagc 150  
 gccgctgttc accaatcggg gagagaaaag cggagatcct gctcgccttg 200  
 cacgcgcctg aagcaciaag cagatagcta ggaatgaacc atccctggga 250  
 gtatgtggaa acaacggagg agctctgact tcccaactgt ccattctat 300  
 gggcgaagga actgctcctg acttcagtgg ttaagggcag aattgaaaat 350  
 aattctggag gaagataaga atgattcctg cgcgactgca ccgggactac 400  
 aaagggcttg tcctgctggg aatcctcctg gggactctgt gggagaccgg 450  
 atgcacccag atacgtatt cagttccgga agagctggag aaaggctcta 500  
 ggggtgggca catctccagg gacctggggc tggagccccg ggagctcgcg 550  
 gagcgcggag tccgcatcat cccagaggt aggacgcagc ttttcgccct 600  
 gaatccgcgc agcggcagct tggtcacggc gggcaggata gaccgggagg 650

agctctgtat gggggccatc aagtgtcaat taaatctaga cattctgatg 700  
gaggataaaag tgaaaatata tggagtagaa gtagaagtaa gggacattaa 750  
cgacaatgcg ccttactttc gtgaaagtga attagaaata aaaattagtg 800  
aaaatgcagc cactgagatg cggttccctc taccacacgc ctgggatccg 850  
gatatcgga agaactctct gcagagctac gagctcagcc cgaacactca 900  
cttctccctc atcgtgcaaa atggagccga cggtagtaag taccocgaat 950  
tggtgctgaa acgcgccttg gaccgcgaag aaaaggctgc tcaccacctg 1000  
gtccttacgg cctccgacgg gggcgacccg gtgcgcacag gcaccgcgcg 1050  
catccgcgtg atggttctgg atgcgaacga caacgcacca gcgtttgctc 1100  
agcccgagta ccgcgcgagc gttccggaga atctggcctt gggcacgcag 1150  
ctgctttag tcaacgctac cgaccctgac gaaggagtca atgcggaagt 1200  
gaggtattcc ttccggtatg tggacgacaa ggcggcccaa gttttcaaac 1250  
tagattgtaa ttcagggaca atatcaacaa taggggagtt ggaccacgag 1300  
gagtcaggat tctaccagat ggaagtgcaa gcaatggata atgcaggata 1350  
ttctgcgcga gccaaagtcc tgatcactgt tctggacgtg aacgacaatg 1400  
ccccagaagt ggtcctcacc tctctcgcca gctcgggttc cgaaaactct 1450  
cccagaggga cattaattgc ccttttaaata gtaaataacc aagattctga 1500  
ggaaaacgga caggatgatc gtttcatcca aggaaatctg ccctttaaat 1550  
tagaaaaatc ttacggaaat tactatagtt tagtcacaga catagtcttg 1600  
gatagggaac aggttcctag ctacaacatc acagtgaccg cactgaccg 1650  
gggaaccccg ccctatcca cggaaactca tatctcgtg aacgtggcag 1700  
acaccaacga caaccgcgcg gtcttcctc aggcctccta ttccgcttat 1750  
atcccagaga acaatcccag aggagtttcc ctcgtctctg tgaccgcca 1800  
cgaccccgac tgtgaagaga acgccagat cacttattcc ctggctgaga 1850  
acaccatcca aggggcaagc ctatcgtcct acgtgtccat caactccgac 1900  
actggggtac tgtatgcgt gagctcctc gactacgagc agttccgaga 1950  
cttgcaagtg aaagtgatgg cgcgggacaa cgggcacccg cccctcagca 2000  
gcaacgtgtc gttgagcctg ttcgtgctgg accagaacga caatgcgccc 2050  
gagatcctgt accccgcct cccacggac ggttccactg gcgtggagct 2100

ggctccccgc tccgcagagc ccggtacct ggtgaccaag gtggtggcgg 2150  
 tggacagaga ctccggccag aacgcctggc tgtcctaccg tctgctcaag 2200  
 gccagcgagc cgggactctt ctcggtgggt ctgcacacgg gcgaggtgcg 2250  
 cacggcgcgga gccctgctgg acagagacgc gctcaagcag agcctcgtag 2300  
 tggccgtcca ggaccacggc cagccccctc tctccgccac tgtcacgctc 2350  
 accgtggccg tggccgacag catcccccaa gtcctggcgg acctcggcag 2400  
 cctcgagtct ccagctaact ctgaaacctc agacctcact ctgtacctgg 2450  
 tggtagcggg ggccgcggtc tctgcgtct tctggcctt cgtcatcttg 2500  
 ctgctggcgc tcaggtgcg gcgctggcac aagtcacgcc tgetgcaggc 2550  
 ttcaggaggc ggcttgacag gagcgccggc gtcgcacttt gtgggcgtgg 2600  
 acggggtgca ggctttcctg cagacctatt cccacgaggt ttcctcacc 2650  
 acggactcgc ggaagagtca cctgatcttc cccagccca actatgcaga 2700  
 catgctcgtc agccaggaga gctttgaaaa aagcgagccc cttttgctgt 2750  
 caggtgattc ggtattttct aaagacagtc atgggttaat tgaggtgagt 2800  
 ttatatcaaa tcttctttct tttttttttt aattgctctg tctcccaagc 2850  
 tggagtgcag cggtaacgac atagctcact gcggcctcaa actcctaggc 2900  
 tcaagcaatt atcccacett tgcctccggt gtaacaggga ctacaggtgc 2950  
 aagccacctc ctgtctgcct atctatctat ctatctatct atctatctat 3000  
 ctatctatct atctatctat tactttcttg tacagacggg agtctcacgc 3050  
 ctgtaatccc agtactttgg gaggccgagg cgggtggatc acctgaggtt 3100  
 gggagtgtga gaccagcctg accaacaatg agaaaccccg tctatactaa 3150  
 aaaaatacaa aattagccgg gcgtgggtgg gcatgtctgt aatcccagct 3200  
 acttgggagg ctgagtcagg agaattgctt taacctggga ggtggaggtt 3250  
 gcaatgagct gagattgtgc cattgcactc cagcctgggc aacaagagtg 3300  
 aaactctatc tca 3313

<210> 390

<211> 916

<212> PRT

<213> Homo sapiens

<400> 390

Met	Ile	Pro	Ala	Arg	Leu	His	Arg	Asp	Tyr	Lys	Gly	Leu	Val	Leu		1	5	10	15
Leu	Gly	Ile	Leu	Leu	Gly	Thr	Leu	Trp	Glu	Thr	Gly	Cys	Thr	Gln		20	25	30	
Ile	Arg	Tyr	Ser	Val	Pro	Glu	Glu	Leu	Glu	Lys	Gly	Ser	Arg	Val		35	40	45	
Gly	Asp	Ile	Ser	Arg	Asp	Leu	Gly	Leu	Glu	Pro	Arg	Glu	Leu	Ala		50	55	60	
Glu	Arg	Gly	Val	Arg	Ile	Ile	Pro	Arg	Gly	Arg	Thr	Gln	Leu	Phe		65	70	75	
Ala	Leu	Asn	Pro	Arg	Ser	Gly	Ser	Leu	Val	Thr	Ala	Gly	Arg	Ile		80	85	90	
Asp	Arg	Glu	Glu	Leu	Cys	Met	Gly	Ala	Ile	Lys	Cys	Gln	Leu	Asn		95	100	105	
Leu	Asp	Ile	Leu	Met	Glu	Asp	Lys	Val	Lys	Ile	Tyr	Gly	Val	Glu		110	115	120	
Val	Glu	Val	Arg	Asp	Ile	Asn	Asp	Asn	Ala	Pro	Tyr	Phe	Arg	Glu		125	130	135	
Ser	Glu	Leu	Glu	Ile	Lys	Ile	Ser	Glu	Asn	Ala	Ala	Thr	Glu	Met		140	145	150	
Arg	Phe	Pro	Leu	Pro	His	Ala	Trp	Asp	Pro	Asp	Ile	Gly	Lys	Asn		155	160	165	
Ser	Leu	Gln	Ser	Tyr	Glu	Leu	Ser	Pro	Asn	Thr	His	Phe	Ser	Leu		170	175	180	
Ile	Val	Gln	Asn	Gly	Ala	Asp	Gly	Ser	Lys	Tyr	Pro	Glu	Leu	Val		185	190	195	
Leu	Lys	Arg	Ala	Leu	Asp	Arg	Glu	Glu	Lys	Ala	Ala	His	His	Leu		200	205	210	
Val	Leu	Thr	Ala	Ser	Asp	Gly	Gly	Asp	Pro	Val	Arg	Thr	Gly	Thr		215	220	225	
Ala	Arg	Ile	Arg	Val	Met	Val	Leu	Asp	Ala	Asn	Asp	Asn	Ala	Pro		230	235	240	
Ala	Phe	Ala	Gln	Pro	Glu	Tyr	Arg	Ala	Ser	Val	Pro	Glu	Asn	Leu		245	250	255	
Ala	Leu	Gly	Thr	Gln	Leu	Leu	Val	Val	Asn	Ala	Thr	Asp	Pro	Asp		260	265	270	
Glu	Gly	Val	Asn	Ala	Glu	Val	Arg	Tyr	Ser	Phe	Arg	Tyr	Val	Asp		275	280	285	

Asp Lys Ala Ala Gln Val Phe Lys Leu	Asp Cys Asn Ser Gly Thr	290	295	300
Ile Ser Thr Ile Gly Glu Leu Asp His	Glu Glu Ser Gly Phe Tyr	305	310	315
Gln Met Glu Val Gln Ala Met Asp Asn	Ala Gly Tyr Ser Ala Arg	320	325	330
Ala Lys Val Leu Ile Thr Val Leu Asp	Val Asn Asp Asn Ala Pro	335	340	345
Glu Val Val Leu Thr Ser Leu Ala Ser	Ser Val Pro Glu Asn Ser	350	355	360
Pro Arg Gly Thr Leu Ile Ala Leu Leu	Asn Val Asn Asp Gln Asp	365	370	375
Ser Glu Glu Asn Gly Gln Val Ile Cys	Phe Ile Gln Gly Asn Leu	380	385	390
Pro Phe Lys Leu Glu Lys Ser Tyr Gly	Asn Tyr Tyr Ser Leu Val	395	400	405
Thr Asp Ile Val Leu Asp Arg Glu Gln	Val Pro Ser Tyr Asn Ile	410	415	420
Thr Val Thr Ala Thr Asp Arg Gly Thr	Pro Pro Leu Ser Thr Glu	425	430	435
Thr His Ile Ser Leu Asn Val Ala Asp	Thr Asn Asp Asn Pro Pro	440	445	450
Val Phe Pro Gln Ala Ser Tyr Ser Ala	Tyr Ile Pro Glu Asn Asn	455	460	465
Pro Arg Gly Val Ser Leu Val Ser Val	Thr Ala His Asp Pro Asp	470	475	480
Cys Glu Glu Asn Ala Gln Ile Thr Tyr	Ser Leu Ala Glu Asn Thr	485	490	495
Ile Gln Gly Ala Ser Leu Ser Ser Tyr	Val Ser Ile Asn Ser Asp	500	505	510
Thr Gly Val Leu Tyr Ala Leu Ser Ser	Phe Asp Tyr Glu Gln Phe	515	520	525
Arg Asp Leu Gln Val Lys Val Met Ala	Arg Asp Asn Gly His Pro	530	535	540
Pro Leu Ser Ser Asn Val Ser Leu Ser	Leu Phe Val Leu Asp Gln	545	550	555
Asn Asp Asn Ala Pro Glu Ile Leu Tyr	Pro Ala Leu Pro Thr Asp	560	565	570



Gly Ser Thr Gly Val Glu Leu Ala Pro Arg Ser Ala Glu Pro Gly	575	580	585
Tyr Leu Val Thr Lys Val Val Ala Val Asp Arg Asp Ser Gly Gln	590	595	600
Asn Ala Trp Leu Ser Tyr Arg Leu Leu Lys Ala Ser Glu Pro Gly	605	610	615
Leu Phe Ser Val Gly Leu His Thr Gly Glu Val Arg Thr Ala Arg	620	625	630
Ala Leu Leu Asp Arg Asp Ala Leu Lys Gln Ser Leu Val Val Ala	635	640	645
Val Gln Asp His Gly Gln Pro Pro Leu Ser Ala Thr Val Thr Leu	650	655	660
Thr Val Ala Val Ala Asp Ser Ile Pro Gln Val Leu Ala Asp Leu	665	670	675
Gly Ser Leu Glu Ser Pro Ala Asn Ser Glu Thr Ser Asp Leu Thr	680	685	690
Leu Tyr Leu Val Val Ala Val Ala Ala Val Ser Cys Val Phe Leu	695	700	705
Ala Phe Val Ile Leu Leu Leu Ala Leu Arg Leu Arg Arg Trp His	710	715	720
Lys Ser Arg Leu Leu Gln Ala Ser Gly Gly Gly Leu Thr Gly Ala	725	730	735
Pro Ala Ser His Phe Val Gly Val Asp Gly Val Gln Ala Phe Leu	740	745	750
Gln Thr Tyr Ser His Glu Val Ser Leu Thr Thr Asp Ser Arg Lys	755	760	765
Ser His Leu Ile Phe Pro Gln Pro Asn Tyr Ala Asp Met Leu Val	770	775	780
Ser Gln Glu Ser Phe Glu Lys Ser Glu Pro Leu Leu Leu Ser Gly	785	790	795
Asp Ser Val Phe Ser Lys Asp Ser His Gly Leu Ile Glu Val Ser	800	805	810
Leu Tyr Gln Ile Phe Phe Leu Phe Phe Phe Asn Cys Ser Val Ser	815	820	825
Gln Ala Gly Val Gln Arg Tyr Asp His Ser Ser Leu Arg Pro Gln	830	835	840
Thr Pro Arg Leu Lys Gln Leu Ser His Leu Cys Leu Arg Cys Asn	845	850	855

Arg	Asp	Tyr	Arg	Cys	Lys	Pro	Pro	Thr	Val	Cys	Leu	Ser	Ile	Tyr
				860					865					870
Leu	Ser	Ile	Tyr	Leu	Ser	Ile	Tyr	Leu	Ser	Ile	Tyr	Leu	Leu	Leu
				875					880					885
Ser	Cys	Thr	Asp	Gly	Ser	Leu	Thr	Pro	Val	Ile	Pro	Val	Leu	Trp
				890					895					900
Glu	Ala	Glu	Ala	Gly	Gly	Ser	Pro	Glu	Val	Gly	Ser	Leu	Arg	Pro
				905					910					915

Ala

<210> 391

<211> 23

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 391

tccgtctctg tgaaccgccc cac 23

<210> 392

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 392

ctcgggcgca ttgtcgttct ggtc 24

<210> 393

<211> 40

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 393

ccgactgtga aagagaacgc cccagatcca cttgttcccc 40

<210> 394

<211> 999

<212> DNA

<213> Homo sapiens

<400> 394

cccaggctct agtgcaggag gagaaggagg aggagcagga ggtggagatt 50

cccagttaaa aggctccaga atcgtgtacc aggagagaaa ctgaagtact 100

ggggcctcct ccactgggtc cgaatcagta ggtgaccccg cccctggatt 150  
 ctggaagacc tcaccatggg acgccccga cctcgtgagg ccaagacgtg 200  
 gatgttcctg ctcttgctgg ggggagcctg ggcaggacac tccagggcac 250  
 aggaggacaa ggtgctgggg ggtcatgagt gccaacccca ttcgcagcct 300  
 tggcaggcgg ccttgttcca gggccagcaa ctactctgtg gcggtgtcct 350  
 tgtaggtggc aactgggtcc ttacagctgc ccactgtaaa aaaccgaaat 400  
 acacagtacg cctgggagac cacagcctac agaataaaga tggcccagag 450  
 caagaaatac ctgtgggttc gtccatccca caccctgct acaacagcag 500  
 cgatgtggag gaccacaacc atgatctgat gcttcttcaa ctgcgtgacc 550  
 aggcattcct ggggtccaaa gtgaagccca tcagcctggc agatcattgc 600  
 acccagcctg gccagaagtg caccgtctca ggctggggca ctgtcaccag 650  
 tccccgagag aattttcctg acactctcaa ctgtgcagaa gtaaaaatct 700  
 ttccccagaa gaagtgtgag gatgcttacc cggggcagat cacagatggc 750  
 atggtctgtg caggcagcag caaaggggct gacacgtgcc agggcgattc 800  
 tggaggcccc ctggtgtgtg atggtgcact ccagggcatc acatcctggg 850  
 gctcagaccc ctgtgggagg tccgacaaac ctggcgtcta taccaacatc 900  
 tgccgctacc tggactggat caagaagatc ataggcagca agggctgatt 950  
 ctaggataag cactagatct cccttaataa actcacaact ctctggttc 999

<210> 395

<211> 260

<212> PRT

<213> Homo sapiens

<400> 395

Met	Gly	Arg	Pro	Arg	Pro	Arg	Ala	Ala	Lys	Thr	Trp	Met	Phe	Leu
1				5					10					15
Leu	Leu	Leu	Gly	Gly	Ala	Trp	Ala	Gly	His	Ser	Arg	Ala	Gln	Glu
			20						25					30
Asp	Lys	Val	Leu	Gly	Gly	His	Glu	Cys	Gln	Pro	His	Ser	Gln	Pro
			35						40					45
Trp	Gln	Ala	Ala	Leu	Phe	Gln	Gly	Gln	Gln	Leu	Leu	Cys	Gly	Gly
			50						55					60
Val	Leu	Val	Gly	Gly	Asn	Trp	Val	Leu	Thr	Ala	Ala	His	Cys	Lys
			65						70					75

Lys	Pro	Lys	Tyr	Thr	Val	Arg	Leu	Gly	Asp	His	Ser	Leu	Gln	Asn	
				80					85					90	
Lys	Asp	Gly	Pro	Glu	Gln	Glu	Ile	Pro	Val	Val	Gln	Ser	Ile	Pro	
				95					100					105	
His	Pro	Cys	Tyr	Asn	Ser	Ser	Asp	Val	Glu	Asp	His	Asn	His	Asp	
				110					115					120	
Leu	Met	Leu	Leu	Gln	Leu	Arg	Asp	Gln	Ala	Ser	Leu	Gly	Ser	Lys	
				125					130					135	
Val	Lys	Pro	Ile	Ser	Leu	Ala	Asp	His	Cys	Thr	Gln	Pro	Gly	Gln	
				140					145					150	
Lys	Cys	Thr	Val	Ser	Gly	Trp	Gly	Thr	Val	Thr	Ser	Pro	Arg	Glu	
				155					160					165	
Asn	Phe	Pro	Asp	Thr	Leu	Asn	Cys	Ala	Glu	Val	Lys	Ile	Phe	Pro	
				170					175					180	
Gln	Lys	Lys	Cys	Glu	Asp	Ala	Tyr	Pro	Gly	Gln	Ile	Thr	Asp	Gly	
				185					190					195	
Met	Val	Cys	Ala	Gly	Ser	Ser	Lys	Gly	Ala	Asp	Thr	Cys	Gln	Gly	
				200					205					210	
Asp	Ser	Gly	Gly	Pro	Leu	Val	Cys	Asp	Gly	Ala	Leu	Gln	Gly	Ile	
				215					220					225	
Thr	Ser	Trp	Gly	Ser	Asp	Pro	Cys	Gly	Arg	Ser	Asp	Lys	Pro	Gly	
				230					235					240	
Val	Tyr	Thr	Asn	Ile	Cys	Arg	Tyr	Leu	Asp	Trp	Ile	Lys	Lys	Ile	
				245					250					255	
Ile	Gly	Ser	Lys	Gly											
				260											

<210> 396

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 396

cagcctacag aataaagatg gcc 24

<210> 397

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 397

ggtgcaatga tctgccaggc tgat 24

<210> 398

<211> 48

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 398

agaaataacct gtggttcagt ccatcccaaa cccctgctac aacagcag 48

<210> 399

<211> 2236

<212> DNA

<213> Homo sapiens

<400> 399

ggcgccggtg caaccggcggtg gctgagcgcc tectgcggtc cggcctgcgc 50

gccccggccc gccgcgccgc ccacgcccc accccggccc gcgcccccta 100

gccccgccc gggcccgccc ccgcgccgc gccaggtga gcgctccgcc 150

cgccgcgagg ccccgcccc gccgccccc gccccgcccc ggccggcggtg 200

ggaaccgggc ggattcctcg cgcgtcaaac cacctgatcc cataaaacat 250

tcattctccc ggcgccccgc gctgcgagcg ccccgccagt ccgcgccgc 300

gccgccctcg cctgtgcgc cctgcgcgcc ctgcgcaccc gcggcccgag 350

cccagccaga gccgggaggga gcggagcgcg ccgagcctcg tcccgcggtc 400

gggcccgggc cgggcccgtag cggcgccgcc tggatgcgga cccggccgcg 450

gggagacggg cggccgcccc gaaacgactt tcagtccccg acgcgccccg 500

cccaaccctt acgatgaaga gggcgtccgc tggagggagc cggctgctgg 550

catgggtgct gtggctgcag gcctggcagg tggcagcccc atgcccaggt 600

gcctgcgtat gctacaatga gcccaagggtg acgacaagct gccccagca 650

gggcctgcag gctgtgcccg tgggcatccc tgctgccagc cagcgcattc 700

tcctgcacgg caaccgcatc tcgcatgtgc cagctgccag cttccgtgcc 750

tgccgcaacc tcaccatcct gtggctgcac tcgaatgtgc tggcccgaa 800

tgatgcggct gccttactg gcctggccct cctggagcag ctggacctca 850

gcgataatgc acagctccgg tctgtggacc ctgccacatt ccacggcctg 900

ggccgcctac acacgctgca cctggaccgc tgcggcctgc aggagctggg 950  
 cccggggctg ttccgcggcc tggtgccct gcagtacctc tacctgcagg 1000  
 acaacgcgct gcaggcactg cctgatgaca ccttccgcga cctggggaac 1050  
 ctcacacacc tcttcctgca cggcaaccgc atctccagcg tgcccagagc 1100  
 cgccttcctg gggctgcaca gcctcgaccg tctcctactg caccagaacc 1150  
 gcgtggccca tgtgcaccgc catgccttcc gtgaccttgg ccgcctcatg 1200  
 acactctatc tgtttgccaa caatctatca gcgctgccca ctgaggccct 1250  
 ggccccctg cgtgccctgc agtacctgag gctcaacgac aaccctggg 1300  
 tgtgtgactg ccgggcacgc ccactctggg cctggctgca gaagttccgc 1350  
 ggctcctcct ccgaggtgcc ctgcagcctc ccgcaacgcc tggctggccg 1400  
 tgacctcaaa cgcctagctg ccaatgacct gcagggtgc gctgtggcca 1450  
 ccggccctta ccatcccatc tggaccggca gggccaccga tgaggagccg 1500  
 ctggggcttc ccaagtgcct ccagccagat gccgctgaca aggcctcagt 1550  
 actggagcct ggaagaccag cttcggcagg caatgcgctg aagggacgcg 1600  
 tgccgcccgg tgacagcccg ccgggcaacg gctctggccc acggcacatc 1650  
 aatgactcac cctttgggac tctgcctggc tctgctgagc cccgctcac 1700  
 tgagtgcgg cccgagggct ccgagccacc agggttcccc acctcgggc 1750  
 ctgcgccgag gccaggtgt tcacgcaaga accgcacccg cagccactgc 1800  
 cgtctgggcc aggcaggcag cgggggtggc gggactgggtg actcagaagg 1850  
 ctcaggtgcc ctaccagcc tcacctgcag cctcaccccc ctgggccttg 1900  
 cgctgggtgt gtggacagt cttgggccct gctgaccccc agcggacaca 1950  
 agagcgtgct cagcagccag gtgtgtgtac atacgggggtc tctctccacg 2000  
 ccgccaagcc agccggggcg ccgaccctg gggcaggcca ggccaggtcc 2050  
 tcctgatgg acgcctgccg cccgccaccc ccatctccac cccatcatgt 2100  
 ttacagggtt cggcggcagc gtttgttcca gaacgccgc tcccaccag 2150  
 atcgcggtat atagagatat gcattttatt ttacttgtgt aaaaatatcg 2200  
 gacgacgtgg aataaagagc tcttttctta aaaaaa 2236

<210> 400

<211> 473

<212> PRT

<213> Homo sapiens

<400> 400

Met	Lys	Arg	Ala	Ser	Ala	Gly	Gly	Ser	Arg	Leu	Leu	Ala	Trp	Val
1				5					10					15
Leu	Trp	Leu	Gln	Ala	Trp	Gln	Val	Ala	Ala	Pro	Cys	Pro	Gly	Ala
				20					25					30
Cys	Val	Cys	Tyr	Asn	Glu	Pro	Lys	Val	Thr	Thr	Ser	Cys	Pro	Gln
				35					40					45
Gln	Gly	Leu	Gln	Ala	Val	Pro	Val	Gly	Ile	Pro	Ala	Ala	Ser	Gln
				50					55					60
Arg	Ile	Phe	Leu	His	Gly	Asn	Arg	Ile	Ser	His	Val	Pro	Ala	Ala
				65					70					75
Ser	Phe	Arg	Ala	Cys	Arg	Asn	Leu	Thr	Ile	Leu	Trp	Leu	His	Ser
				80					85					90
Asn	Val	Leu	Ala	Arg	Ile	Asp	Ala	Ala	Ala	Phe	Thr	Gly	Leu	Ala
				95					100					105
Leu	Leu	Glu	Gln	Leu	Asp	Leu	Ser	Asp	Asn	Ala	Gln	Leu	Arg	Ser
				110					115					120
Val	Asp	Pro	Ala	Thr	Phe	His	Gly	Leu	Gly	Arg	Leu	His	Thr	Leu
				125					130					135
His	Leu	Asp	Arg	Cys	Gly	Leu	Gln	Glu	Leu	Gly	Pro	Gly	Leu	Phe
				140					145					150
Arg	Gly	Leu	Ala	Ala	Leu	Gln	Tyr	Leu	Tyr	Leu	Gln	Asp	Asn	Ala
				155					160					165
Leu	Gln	Ala	Leu	Pro	Asp	Asp	Thr	Phe	Arg	Asp	Leu	Gly	Asn	Leu
				170					175					180
Thr	His	Leu	Phe	Leu	His	Gly	Asn	Arg	Ile	Ser	Ser	Val	Pro	Glu
				185					190					195
Arg	Ala	Phe	Arg	Gly	Leu	His	Ser	Leu	Asp	Arg	Leu	Leu	Leu	His
				200					205					210
Gln	Asn	Arg	Val	Ala	His	Val	His	Pro	His	Ala	Phe	Arg	Asp	Leu
				215					220					225
Gly	Arg	Leu	Met	Thr	Leu	Tyr	Leu	Phe	Ala	Asn	Asn	Leu	Ser	Ala
				230					235					240
Leu	Pro	Thr	Glu	Ala	Leu	Ala	Pro	Leu	Arg	Ala	Leu	Gln	Tyr	Leu
				245					250					255
Arg	Leu	Asn	Asp	Asn	Pro	Trp	Val	Cys	Asp	Cys	Arg	Ala	Arg	Pro
				260					265					270

Leu Trp Ala Trp	Leu Gln Lys Phe Arg	Gly Ser Ser Ser	Glu Val
275		280	285
Pro Cys Ser Leu	Pro Gln Arg Leu Ala	Gly Arg Asp Leu Lys	Arg
290		295	300
Leu Ala Ala Asn Asp	Leu Gln Gly Cys	Ala Val Ala Thr Gly	Pro
305		310	315
Tyr His Pro Ile Trp	Thr Gly Arg Ala	Thr Asp Glu Glu Pro	Leu
320		325	330
Gly Leu Pro Lys Cys	Cys Gln Pro Asp	Ala Ala Asp Lys Ala	Ser
335		340	345
Val Leu Glu Pro Gly	Arg Pro Ala Ser	Ala Gly Asn Ala Leu	Lys
350		355	360
Gly Arg Val Pro Pro	Gly Asp Ser Pro	Pro Gly Asn Gly Ser	Gly
365		370	375
Pro Arg His Ile Asn	Asp Ser Pro Phe	Gly Thr Leu Pro Gly	Ser
380		385	390
Ala Glu Pro Pro Leu	Thr Ala Val Arg	Pro Glu Gly Ser Glu	Pro
395		400	405
Pro Gly Phe Pro Thr	Ser Gly Pro Arg	Arg Arg Pro Gly Cys	Ser
410		415	420
Arg Lys Asn Arg Thr	Arg Ser His Cys	Arg Leu Gly Gln Ala	Gly
425		430	435
Ser Gly Gly Gly Gly	Thr Gly Asp Ser	Glu Gly Ser Gly Ala	Leu
440		445	450
Pro Ser Leu Thr Cys	Ser Leu Thr Pro	Leu Gly Leu Ala Leu	Val
455		460	465
Leu Trp Thr Val Leu	Gly Pro Cys		
470			

<210> 401

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 401

tggtgccct gcagtacctc tacc 24

<210> 402

<211> 24

<212> DNA



<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 402

ccctgcaggt cattggcagc tagg 24

<210> 403

<211> 45

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 403

aggcactgcc tgatgacacc ttccgcgacc tgggcaacct cacac 45

<210> 404

<211> 2738

<212> DNA

<213> Homo sapiens

<400> 404

ggaagtccac ggggagcttg gatgccaaag ggaggacggc tgggtcctct 50

ggagaggact actcactggc atattttctga ggtatctgta gaataaccac 100

agcctcagat actggggact ttacagtccc acagaaccgt cctcccagga 150

agctgaatcc agcaagaaca atggaggcca gcgggaagct catttgca 200

caaaggcaag tcotTTTTTt ctttctcctt ttgggcttat ctctggcggg 250

cgcggcggaa cctagaagct attctgtggt ggaggaaact gagggcagct 300

cctttgtcac caatttagca aaggacctgg gtctggagca gagggaattc 350

tccaggcggg gggttaggtg tgtttccaga ggaacaaac tacatttgca 400

gctcaatcag gagaccgcg atttggtgct aaatgagaaa ttggaccgtg 450

aggatctgtg cggtcacaca gagccctgtg tgctacgttt ccaagtgttg 500

ctagagagtc ccttcgagtt ttttcaagct gagctgcaag taatagacat 550

aaacgaccac tctccagtat ttctggacaa acaaatgttg gtgaaagtat 600

cagagagcag tctcctggg actacgtttc ctctgaagaa tgccgaagac 650

ttagatgtag gccaaaacaa tattgagaac tatataatca gccccaactc 700

ctatTTTtCGG gtctcaccg gcaaacgcag tgatggcagg aaatacccag 750

agctggtgct ggacaaagcg ctggaccgag aggaagaagc tgagctcagg 800

ttaacactca cagcactgga tggtaggtct cgcgccagat ctggcactgc 850  
tcagggtctac atcgaagtcc tggatgtcaa cgataatgcc cctgaatttg 900  
agcagccttt ctatagagtg cagatctctg aggacagtcc ggtaggcttc 950  
ctggttgtga aggtctctgc cacggatgta gacacaggag tcaacggaga 1000  
gatttcttat tcacttttcc aagcttcaga agagattggc aaaaccttta 1050  
agatcaatcc cttgacagga gaaattgaac taaaaaaca actcgatttc 1100  
gaaaaacttc agtcctatga agtcaatatt gaggcaagag atgctggaac 1150  
cttttctgga aaatgcaccg ttctgattca agtgatagat gtgaacgacc 1200  
atgccccaga agttaccatg tctgcattta ccagcccaat acctgagaac 1250  
gcgcctgaaa ctgtggttgc acttttcagt gtttcagatc ttgattcagg 1300  
agaaaatggg aaaattagtt gctccattca ggaggatcta cccttctctc 1350  
tgaaatccgc ggaacttt tacaccctac taacggagag accactagac 1400  
agagaaagca gagcgaata caacatcact atcactgtca ctgacttggg 1450  
gacctctatg ctgataacac agctcaatat gaccgtgctg atcgccgatg 1500  
tcaatgacaa cgctcccgcc ttcacccaaa cctcctacac cctgttcgtc 1550  
cgcgagaaca acagccccgc cctgcacatc cgcagcgtca gcgctacaga 1600  
cagagactca ggcaccaacg ccaggtcac ctactcgtg ctgccgccc 1650  
aggacccgca cctgccctc acatccctgg tctccatcaa cgcggacaac 1700  
ggccacctgt tcgccctcag gtctctggac tacgagggcc tgcaggggtt 1750  
ccagttccgc gtgggcgctt cagaccacgg ctccccggcg ctgagcagcg 1800  
aggcgtggt gcgcgtggtg gtgctggacg ccaacgacaa ctgcacctc 1850  
gtgctgtacc cgctgcagaa cggctccgcg ccctgcaccg agctggtgcc 1900  
ccgggcggcc gagccgggt acctggtgac caaggtggtg gcggtggacg 1950  
gcgactcggg ccagaacgcc tggctgtcgt accagctgct caaggccacg 2000  
gagctcggtc tgttcggcgt gtgggcgcac aatggcgagg tgcgcaccgc 2050  
caggctgctg agcgagcgcg acgcggccaa gcacaggctg gtggtgctgg 2100  
tcaaggacaa tggcgagcct ccgcgctcgg ccaccgccac gctgcacgtg 2150  
ctcctggtgg acggttctc ccagccctac ctgcctctcc cggaggcggc 2200  
cccagccag gccagggcg acttgctcac cgtctacctg gtggtggcgt 2250

tggcctcggt gtcttcgctc ttcctctttt cggtgctcct gttcgtggcg 2300  
 gtgcggtgt gtaggaggag cagggcggcc tcggtgggtc gctgcttggg 2350  
 gcccgagggc ccccttcag ggcatttgt ggacatgagc ggcaccagga 2400  
 ccctatccca gagctaccag tatgaggtgt gtctggcagg aggctcaggg 2450  
 accaatgagt tcaagttcct gaagccgatt atccccaact tccctcccca 2500  
 gtgccctggg aaagaaatac aaggaaattc taccttcccc aataactttg 2550  
 gggtcaatat tcagtacca tagttgactt ttacattcca taggtatttt 2600  
 atttgtggc atttccatgc caatgtttat tcccccaat ttgtgtgtat 2650  
 gtaatattgt acggatttac tcttgatttt tctcatgttc tttctcctt 2700  
 tgttttaaag tgaacattta cctttattcc tggttctt 2738

<210> 405

<211> 798

<212> PRT

<213> Homo sapiens

<400> 405

Met	Glu	Ala	Ser	Gly	Lys	Leu	Ile	Cys	Arg	Gln	Arg	Gln	Val	Leu
1				5					10					15
Phe	Ser	Phe	Leu	Leu	Leu	Gly	Leu	Ser	Leu	Ala	Gly	Ala	Ala	Glu
				20					25					30
Pro	Arg	Ser	Tyr	Ser	Val	Val	Glu	Glu	Thr	Glu	Gly	Ser	Ser	Phe
				35					40					45
Val	Thr	Asn	Leu	Ala	Lys	Asp	Leu	Gly	Leu	Glu	Gln	Arg	Glu	Phe
				50					55					60
Ser	Arg	Arg	Gly	Val	Arg	Val	Val	Ser	Arg	Gly	Asn	Lys	Leu	His
				65					70					75
Leu	Gln	Leu	Asn	Gln	Glu	Thr	Ala	Asp	Leu	Leu	Leu	Asn	Glu	Lys
				80					85					90
Leu	Asp	Arg	Glu	Asp	Leu	Cys	Gly	His	Thr	Glu	Pro	Cys	Val	Leu
				95					100					105
Arg	Phe	Gln	Val	Leu	Leu	Glu	Ser	Pro	Phe	Glu	Phe	Phe	Gln	Ala
				110					115					120
Glu	Leu	Gln	Val	Ile	Asp	Ile	Asn	Asp	His	Ser	Pro	Val	Phe	Leu
				125					130					135
Asp	Lys	Gln	Met	Leu	Val	Lys	Val	Ser	Glu	Ser	Ser	Pro	Pro	Gly
				140					145					150

Thr Thr Phe Pro	Leu Lys Asn Ala Glu	Asp Leu Asp Val Gly Gln	155	160	165
Asn Asn Ile Glu	Asn Tyr Ile Ile Ser	Pro Asn Ser Tyr Phe Arg	170	175	180
Val Leu Thr Arg	Lys Arg Ser Asp Gly	Arg Lys Tyr Pro Glu Leu	185	190	195
Val Leu Asp Lys	Ala Leu Asp Arg Glu	Glu Glu Ala Glu Leu Arg	200	205	210
Leu Thr Leu Thr	Ala Leu Asp Gly Gly	Ser Pro Pro Arg Ser Gly	215	220	225
Thr Ala Gln Val	Tyr Ile Glu Val Leu	Asp Val Asn Asp Asn Ala	230	235	240
Pro Glu Phe Glu	Gln Pro Phe Tyr Arg	Val Gln Ile Ser Glu Asp	245	250	255
Ser Pro Val Gly	Phe Leu Val Val Lys	Val Ser Ala Thr Asp Val	260	265	270
Asp Thr Gly Val	Asn Gly Glu Ile Ser	Tyr Ser Leu Phe Gln Ala	275	280	285
Ser Glu Glu Ile	Gly Lys Thr Phe Lys	Ile Asn Pro Leu Thr Gly	290	295	300
Glu Ile Glu Leu	Lys Lys Gln Leu Asp	Phe Glu Lys Leu Gln Ser	305	310	315
Tyr Glu Val Asn	Ile Glu Ala Arg Asp	Ala Gly Thr Phe Ser Gly	320	325	330
Lys Cys Thr Val	Leu Ile Gln Val Ile	Asp Val Asn Asp His Ala	335	340	345
Pro Glu Val Thr	Met Ser Ala Phe Thr	Ser Pro Ile Pro Glu Asn	350	355	360
Ala Pro Glu Thr	Val Val Ala Leu Phe	Ser Val Ser Asp Leu Asp	365	370	375
Ser Gly Glu Asn	Gly Lys Ile Ser Cys	Ser Ile Gln Glu Asp Leu	380	385	390
Pro Phe Leu Leu	Lys Ser Ala Glu Asn	Phe Tyr Thr Leu Leu Thr	395	400	405
Glu Arg Pro Leu	Asp Arg Glu Ser Arg	Ala Glu Tyr Asn Ile Thr	410	415	420
Ile Thr Val Thr	Asp Leu Gly Thr Pro	Met Leu Ile Thr Gln Leu	425	430	435

Asn Met Thr Val	Leu Ile Ala Asp Val	Asn Asp Asn Ala Pro	Ala
440	445	450	
Phe Thr Gln Thr	Ser Tyr Thr Leu Phe	Val Arg Glu Asn Asn	Ser
455	460	465	
Pro Ala Leu His	Ile Arg Ser Val Ser	Ala Thr Asp Arg Asp	Ser
470	475	480	
Gly Thr Asn Ala	Gln Val Thr Tyr Ser	Leu Leu Pro Pro Gln	Asp
485	490	495	
Pro His Leu Pro	Leu Thr Ser Leu Val	Ser Ile Asn Ala Asp	Asn
500	505	510	
Gly His Leu Phe	Ala Leu Arg Ser Leu	Asp Tyr Glu Ala Leu	Gln
515	520	525	
Gly Phe Gln Phe	Arg Val Gly Ala Ser	Asp His Gly Ser Pro	Ala
530	535	540	
Leu Ser Ser Glu	Ala Leu Val Arg Val	Val Val Leu Asp Ala	Asn
545	550	555	
Asp Asn Ser Pro	Phe Val Leu Tyr Pro	Leu Gln Asn Gly Ser	Ala
560	565	570	
Pro Cys Thr Glu	Leu Val Pro Arg Ala	Ala Glu Pro Gly Tyr	Leu
575	580	585	
Val Thr Lys Val	Val Ala Val Asp Gly	Asp Ser Gly Gln Asn	Ala
590	595	600	
Trp Leu Ser Tyr	Gln Leu Leu Lys Ala	Thr Glu Leu Gly Leu	Phe
605	610	615	
Gly Val Trp Ala	His Asn Gly Glu Val	Arg Thr Ala Arg Leu	Leu
620	625	630	
Ser Glu Arg Asp	Ala Ala Lys His Arg	Leu Val Val Leu Val	Lys
635	640	645	
Asp Asn Gly Glu	Pro Pro Arg Ser Ala	Thr Ala Thr Leu His	Val
650	655	660	
Leu Leu Val Asp	Gly Phe Ser Gln Pro	Tyr Leu Pro Leu Pro	Glu
665	670	675	
Ala Ala Pro Thr	Gln Ala Gln Ala Asp	Leu Leu Thr Val Tyr	Leu
680	685	690	
Val Val Ala Leu	Ala Ser Val Ser Ser	Leu Phe Leu Phe Ser	Val
695	700	705	
Leu Leu Phe Val	Ala Val Arg Leu Cys	Arg Arg Ser Arg Ala	Ala
710	715	720	

Ser	Val	Gly	Arg	Cys	Leu	Val	Pro	Glu	Gly	Pro	Leu	Pro	Gly	His
				725					730					735
Leu	Val	Asp	Met	Ser	Gly	Thr	Arg	Thr	Leu	Ser	Gln	Ser	Tyr	Gln
				740					745					750
Tyr	Glu	Val	Cys	Leu	Ala	Gly	Gly	Ser	Gly	Thr	Asn	Glu	Phe	Lys
				755					760					765
Phe	Leu	Lys	Pro	Ile	Ile	Pro	Asn	Phe	Pro	Pro	Gln	Cys	Pro	Gly
				770					775					780
Lys	Glu	Ile	Gln	Gly	Asn	Ser	Thr	Phe	Pro	Asn	Asn	Phe	Gly	Phe
				785					790					795

Asn Ile Gln

<210> 406

<211> 23

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 406

ctgagaacgc gcctgaaact gtg 23

<210> 407

<211> 22

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 407

agcgttgtca ttgacatcgg cg 22

<210> 408

<211> 50

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 408

ttagttgctc cattcaggag gatctaccct tcctcctgaa atccgcggaa 50

<210> 409

<211> 1379

<212> DNA

<213> Homo sapiens

<400> 409

acccacgcgt ccgcccacgc gtccgcccac gcgtccgccc acgcgtccgc 50  
 gcgtagccgt gcgccgattg cctctcgccc tgggcaatgg tcccggctgc 100  
 cggtcgacga ccgccccgcg tcatgcggct cctcggtggg tggcaagtat 150  
 tgctgtgggt gctgggactt cccgtccgcg gcgtggaggt tgcaaggaa 200  
 agtggtcgct tatggtcaga ggagcagcct gctcacctc tccaggtggg 250  
 ggctgtgtac ctgggtgagg aggagctcct gcatgaccg atgggccagg 300  
 acagggcagc agaagaggcc aatgcggtgc tggggctgga cacccaaggc 350  
 gatcacatgg tgatgctgtc tgtgattcct ggggaagctg aggacaaagt 400  
 gagttcagag cctagcggcg tcacctgtgg tgctggagga gcggaggact 450  
 caaggtgcaa cgtccgagag agccttttct ctctggatgg cgctggagca 500  
 cacttccctg acagagaaga ggagtattac acagagccag aagtggcggg 550  
 atctgacgca gcccgcacag aggactccaa taacactgaa agtctgaaat 600  
 ccccaaaggt gaactgtgag gagagaaaca ttacaggatt agaaaatttc 650  
 actctgaaaa ttttaaatat gtcacaggac cttatggatt ttctgaacct 700  
 aaacggtagt gactgtactc tagtcctgtt ttacaccccg tggtgccgct 750  
 tttctgccag tttggccct cactttaact ctctgccccg ggcatttcca 800  
 gctcttcaact ttttggcact ggatgcatct cagcacagca gcctttctac 850  
 caggtttggc accgtagctg ttcctaatat tttattattt caaggagcta 900  
 aaccaatggc cagatttaaat catacagatc gaacactgga aacactgaaa 950  
 atcttcattt ttaatcagac aggtatagaa gccaagaaga atgtggtggg 1000  
 aactcaagcc gaccaaatag gccctcttcc cagcactttg ataaaaagt 1050  
 tggactggtt gcttgatatt tccttattct ttttaattag ttttattatg 1100  
 tatgctacca ttcgaaactga gagtattcgg tggctaattc caggacaaga 1150  
 gcaggaacat gtggagtagt gatggtctga aagaagttgg aaagaggaa 1200  
 ttcaatcctt cgtttcagaa attagtgtc cagtttcata cattttctcc 1250  
 agtgacgtgt tgacttgaaa cttcaggcag attaaaagaa tcatttggtg 1300  
 aacaactgaa tgtataaaaa aattataaac tgggtgttta actagtattg 1350  
 caataagcaa atgcaaaaat attcaatag 1379

<211> 360

<212> PRT

<213> Homo sapiens

<400> 410

Met	Val	Pro	Ala	Ala	Gly	Arg	Arg	Pro	Pro	Arg	Val	Met	Arg	Leu	
1				5					10					15	
Leu	Gly	Trp	Trp	Gln	Val	Leu	Leu	Trp	Val	Leu	Gly	Leu	Pro	Val	
				20					25					30	
Arg	Gly	Val	Glu	Val	Ala	Glu	Glu	Ser	Gly	Arg	Leu	Trp	Ser	Glu	
				35					40					45	
Glu	Gln	Pro	Ala	His	Pro	Leu	Gln	Val	Gly	Ala	Val	Tyr	Leu	Gly	
				50					55					60	
Glu	Glu	Glu	Leu	Leu	His	Asp	Pro	Met	Gly	Gln	Asp	Arg	Ala	Ala	
				65					70					75	
Glu	Glu	Ala	Asn	Ala	Val	Leu	Gly	Leu	Asp	Thr	Gln	Gly	Asp	His	
				80					85					90	
Met	Val	Met	Leu	Ser	Val	Ile	Pro	Gly	Glu	Ala	Glu	Asp	Lys	Val	
				95					100					105	
Ser	Ser	Glu	Pro	Ser	Gly	Val	Thr	Cys	Gly	Ala	Gly	Gly	Ala	Glu	
				110					115					120	
Asp	Ser	Arg	Cys	Asn	Val	Arg	Glu	Ser	Leu	Phe	Ser	Leu	Asp	Gly	
				125					130					135	
Ala	Gly	Ala	His	Phe	Pro	Asp	Arg	Glu	Glu	Glu	Tyr	Tyr	Thr	Glu	
				140					145					150	
Pro	Glu	Val	Ala	Glu	Ser	Asp	Ala	Ala	Pro	Thr	Glu	Asp	Ser	Asn	
				155					160					165	
Asn	Thr	Glu	Ser	Leu	Lys	Ser	Pro	Lys	Val	Asn	Cys	Glu	Glu	Arg	
				170					175					180	
Asn	Ile	Thr	Gly	Leu	Glu	Asn	Phe	Thr	Leu	Lys	Ile	Leu	Asn	Met	
				185					190					195	
Ser	Gln	Asp	Leu	Met	Asp	Phe	Leu	Asn	Pro	Asn	Gly	Ser	Asp	Cys	
				200					205					210	
Thr	Leu	Val	Leu	Phe	Tyr	Thr	Pro	Trp	Cys	Arg	Phe	Ser	Ala	Ser	
				215					220					225	
Leu	Ala	Pro	His	Phe	Asn	Ser	Leu	Pro	Arg	Ala	Phe	Pro	Ala	Leu	
				230					235					240	
His	Phe	Leu	Ala	Leu	Asp	Ala	Ser	Gln	His	Ser	Ser	Leu	Ser	Thr	
				245					250					255	
Arg	Phe	Gly	Thr	Val	Ala	Val	Pro	Asn	Ile	Leu	Leu	Phe	Gln	Gly	



	260		265		270
Ala Lys Pro Met	Ala Arg Phe Asn His	Thr Asp Arg Thr Leu Glu			
	275	280			285
Thr Leu Lys Ile	Phe Ile Phe Asn Gln	Thr Gly Ile Glu Ala Lys			
	290	295			300
Lys Asn Val Val	Val Thr Gln Ala Asp	Gln Ile Gly Pro Leu Pro			
	305	310			315
Ser Thr Leu Ile	Lys Ser Val Asp Trp	Leu Leu Val Phe Ser Leu			
	320	325			330
Phe Phe Leu Ile	Ser Phe Ile Met Tyr	Ala Thr Ile Arg Thr Glu			
	335	340			345
Ser Ile Arg Trp	Leu Ile Pro Gly Gln	Glu Gln Glu His Val Glu			
	350	355			360

<210> 411

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 411

cacagagcca gaagtggcgg aatc 24

<210> 412

<211> 25

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 412

ccacatgttc ctgctcttgt cctgg 25

<210> 413

<211> 45

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 413

cggtagtgc tgtagcttag tcctgtttta caccocgtgg tgccg 45

<210> 414

<211> 1196

<212> DNA

<213> Homo sapiens

<400> 414

cccggctccg ctccctctgc cccctcgagg tgcgcgcgcc acgatgctgc 50  
agggccctgg ctgctgctg ctgctcttcc tgcctcgca ctgctgctg 100  
ggctcggcgc gggggtctt cctctttggc cagcccgact tctcctacaa 150  
gcgcagcaat tgcaagccca tcccggtaaa cctgcagctg tgccacggca 200  
tcgaatacca gaacatgcgg ctgcccaccc tgctgggcca cgagaccatg 250  
aaggaggtgc tggagcaggc cggcgcttgg atcccgtgg tcatgaagca 300  
gtgccacccg gacaccaaga agttcctgtg ctgctcttcc gccccgtct 350  
gcctcgatga cctagacgag accatccagc catgccactc gctctgctg 400  
caggtgaagg accgctgcgc cccggctcatg tccgccttcg gcttcccctg 450  
gcccagacatg cttgagtgcg accgtttccc ccaggacaac gacctttgca 500  
tccccctcgc tagcagcgac cacctcctgc cagccaccga ggaagctcca 550  
aaggatatgtg aagcctgcaa aaataaaaat gatgatgaca acgacataat 600  
ggaaacgctt tgtaaaaatg attttgact gaaaataaaa gtgaaggaga 650  
taacctacat caaccgagat accaaaatca tcctggagac caagagcaag 700  
accatttaca agctgaacgg tgtgtccgaa agggacctga agaaatcggg 750  
gctgtggctc aaagacagct tgcagtgcac ctgtgaggag atgaacgaca 800  
tcaacgcgcc ctatctggtc atgggacaga aacagggtgg ggagctggtg 850  
atcacctcgg tgaagcgggtg gcagaagggg cagagagagt tcaagcgcac 900  
ctccgcagc atccgcaagc tgcagtgcta gtcccgcat cctgatggct 950  
ccgacaggcc tgctccagag caaggctgac catttctgct ccgggatctc 1000  
agctcccgtt cccaagcac actcctagct gctccagtct cagcctgggc 1050  
agcttcccc tgcttttgc acgtttgcat cccagcatt tcctgagtta 1100  
taaggccaca ggagtggata gctgttttca cctaaaggaa aagcccaccc 1150  
gaatcttgta gaaatattca aactaataaa atcatgaata ttttaa 1196

<210> 415

<211> 295

<212> PRT

<213> Homo sapiens

<400> 415

Met Leu Gln Gly Pro Gly Ser Leu Leu Leu Phe Leu Ala Ser

1	5	10	15
His Cys Cys Leu Gly	Ser Ala Arg Gly	Leu Phe Leu Phe Gly	Gln
20		25	30
Pro Asp Phe Ser Tyr	Lys Arg Ser Asn Cys	Lys Pro Ile Pro Val	
35		40	45
Asn Leu Gln Leu Cys	His Gly Ile Glu Tyr	Gln Asn Met Arg Leu	
50		55	60
Pro Asn Leu Leu Gly	His Glu Thr Met Lys	Glu Val Leu Glu Gln	
65		70	75
Ala Gly Ala Trp Ile	Pro Leu Val Met Lys	Gln Cys His Pro Asp	
80		85	90
Thr Lys Lys Phe Leu	Cys Ser Leu Phe Ala	Pro Val Cys Leu Asp	
95		100	105
Asp Leu Asp Glu Thr	Ile Gln Pro Cys His	Ser Leu Cys Val Gln	
110		115	120
Val Lys Asp Arg Cys	Ala Pro Val Met Ser	Ala Phe Gly Phe Pro	
125		130	135
Trp Pro Asp Met Leu	Glu Cys Asp Arg Phe	Pro Gln Asp Asn Asp	
140		145	150
Leu Cys Ile Pro Leu	Ala Ser Ser Asp His	Leu Leu Pro Ala Thr	
155		160	165
Glu Glu Ala Pro Lys	Val Cys Glu Ala Cys	Lys Asn Lys Asn Asp	
170		175	180
Asp Asp Asn Asp Ile	Met Glu Thr Leu Cys	Lys Asn Asp Phe Ala	
185		190	195
Leu Lys Ile Lys Val	Lys Glu Ile Thr Tyr	Ile Asn Arg Asp Thr	
200		205	210
Lys Ile Ile Leu Glu	Thr Lys Ser Lys Thr	Ile Tyr Lys Leu Asn	
215		220	225
Gly Val Ser Glu Arg	Asp Leu Lys Lys Ser	Val Leu Trp Leu Lys	
230		235	240
Asp Ser Leu Gln Cys	Thr Cys Glu Glu Met	Asn Asp Ile Asn Ala	
245		250	255
Pro Tyr Leu Val Met	Gly Gln Lys Gln Gly	Gly Glu Leu Val Ile	
260		265	270
Thr Ser Val Lys Arg	Trp Gln Lys Gly Gln	Arg Glu Phe Lys Arg	
275		280	285
Ile Ser Arg Ser Ile	Arg Lys Leu Gln Cys		

<210> 416  
 <211> 21  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 416  
 cctggctcgc tgctgctgct c 21

<210> 417  
 <211> 25  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 417  
 cctcacaggt gcactgcaag ctgtc 25

<210> 418  
 <211> 47  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 418  
 ctcttctctt ttggccagcc cgacttctcc tacaagcgca gaattgc 47

<210> 419  
 <211> 1830  
 <212> DNA  
 <213> Homo sapiens

<400> 419  
 gtggaggccg ccgacgatgg cggggccgac ggaggccgag acgggggttg 50  
 ccgagccccg ggccctgtgc gcgcagcggg gccaccgcac ctacgcgcgc 100  
 cgctgggtgt tctgtctcgc gatcagcctg ctcaactgct ccaacgccac 150  
 gctgtggctc agctttgcac ctgtggctga cgtcattgct gaggacttgg 200  
 tctgtccat ggagcagatc aactggctgt cactggtcta cctcgtggta 250  
 tccaccccat ttggcgtggc ggccatctgg atcctggact ccgtcgggct 300  
 ccgtgcggcg accatcctgg gtgcgtggct gaactttgcc gggagtgtgc 350  
 taogcatggt gccctgcatg gttgttggga cccaaaaccc atttgccttc 400

ctcatgggtg gccagagcct ctgtgccctt gccagagcc tggatcatctt 450  
ctctccagcc aagctggctg ccttgtggtt cccagagcac cagcgagcca 500  
cggccaacat gctcgccacc atgtcgaacc ctctgggcgt ccttgtggcc 550  
aatgtgctgt cccctgtgct ggtcaagaag ggtgaggaca ttccgttaat 600  
gctcgggtgc tataccatcc ctgctggcgt cgtctgcctg ctgtccacca 650  
tctgcctgtg ggagagtgtg cccccaccc cgcctctgc cggggctgcc 700  
agctccacct cagagaagtt cctggatggg ctcaagctgc agtcatgtg 750  
gaacaaggcc tatgtcatcc tggctgtgtg cttgggggga atgatcgga 800  
tctctgccag cttctcagcc ctctggagc agatcctctg tgcaagcggc 850  
cactccagtg ggttttccgg cctctgtggc gctctcttca tcacgttttg 900  
gatcctgggg gactggctc tcggccccta tgtggaccgg accaagcact 950  
tactgaggc caccaagatt ggctgtgcc tgttctctct gccctgcgtg 1000  
ccctttgcc tggtgtccca gctgcaggga cagacccttg cctggctgc 1050  
cacctgctcg ctgctcgggc tgtttggett ctgggtgggc cccgtggcca 1100  
tggagtggc ggtcgagtgt tccttccccg tgggggaggg ggctgccaca 1150  
ggcatgatct ttgtgctggg gcaggccgag ggaataactca tcatgctggc 1200  
aatgacggca ctgactgtgc gacgctcgga gccgtccttg tccacctgcc 1250  
agcaggggga ggatccactt gactggacag tgtctctgct gctgatggcc 1300  
ggcctgtgca cttcttcag ctgcatcctg gcggtcttct tccacacccc 1350  
ataccggcgc ctgcaggccg agtctgggga gccccctcc acccgtaacg 1400  
ccgtgggcgg cgcagactca gggccgggtg tggaccgagg gggagcagga 1450  
agggctggg tctggggcc cagcacggcg actccggagt gcacggcgag 1500  
gggggcctcg ctagaggacc ccagagggcc cgggagcccc caccagcct 1550  
gccaccgagc gactccccgt gcgcaaggcc cagcagccac cgacgcgcc 1600  
tccgccccg gcagactcg aggcagggtc caagcgtcca ggtttattga 1650  
cccgtgtgg tctactcct cttctctc cccgtgggtg atcacgtagc 1700  
tgagcgctt gtagtccagg ttgccgccca catcgatgga ggcgaactgg 1750  
aacatctggt ccacctgcgg gcgggggcga aagggtcct tgcgggctcc 1800  
gggagcgaat tacaagcgcg cacctgaaaa 1830

<210> 420  
 <211> 560  
 <212> PRT  
 <213> Homo sapiens

<400> 420

Met	Ala	Gly	Pro	Thr	Glu	Ala	Glu	Thr	Gly	Leu	Ala	Glu	Pro	Arg	1	5	10	15
Ala	Leu	Cys	Ala	Gln	Arg	Gly	His	Arg	Thr	Tyr	Ala	Arg	Arg	Trp	20	25	30	
Val	Phe	Leu	Leu	Ala	Ile	Ser	Leu	Leu	Asn	Cys	Ser	Asn	Ala	Thr	35	40	45	
Leu	Trp	Leu	Ser	Phe	Ala	Pro	Val	Ala	Asp	Val	Ile	Ala	Glu	Asp	50	55	60	
Leu	Val	Leu	Ser	Met	Glu	Gln	Ile	Asn	Trp	Leu	Ser	Leu	Val	Tyr	65	70	75	
Leu	Val	Val	Ser	Thr	Pro	Phe	Gly	Val	Ala	Ala	Ile	Trp	Ile	Leu	80	85	90	
Asp	Ser	Val	Gly	Leu	Arg	Ala	Ala	Thr	Ile	Leu	Gly	Ala	Trp	Leu	95	100	105	
Asn	Phe	Ala	Gly	Ser	Val	Leu	Arg	Met	Val	Pro	Cys	Met	Val	Val	110	115	120	
Gly	Thr	Gln	Asn	Pro	Phe	Ala	Phe	Leu	Met	Gly	Gly	Gln	Ser	Leu	125	130	135	
Cys	Ala	Leu	Ala	Gln	Ser	Leu	Val	Ile	Phe	Ser	Pro	Ala	Lys	Leu	140	145	150	
Ala	Ala	Leu	Trp	Phe	Pro	Glu	His	Gln	Arg	Ala	Thr	Ala	Asn	Met	155	160	165	
Leu	Ala	Thr	Met	Ser	Asn	Pro	Leu	Gly	Val	Leu	Val	Ala	Asn	Val	170	175	180	
Leu	Ser	Pro	Val	Leu	Val	Lys	Lys	Gly	Glu	Asp	Ile	Pro	Leu	Met	185	190	195	
Leu	Gly	Val	Tyr	Thr	Ile	Pro	Ala	Gly	Val	Val	Cys	Leu	Leu	Ser	200	205	210	
Thr	Ile	Cys	Leu	Trp	Glu	Ser	Val	Pro	Pro	Thr	Pro	Pro	Ser	Ala	215	220	225	
Gly	Ala	Ala	Ser	Ser	Thr	Ser	Glu	Lys	Phe	Leu	Asp	Gly	Leu	Lys	230	235	240	
Leu	Gln	Leu	Met	Trp	Asn	Lys	Ala	Tyr	Val	Ile	Leu	Ala	Val	Cys	245	250	255	

Leu Gly Gly Met	Ile Gly Ile Ser Ala	Ser Phe Ser Ala Leu Leu	260	265	270
Glu Gln Ile Leu	Cys Ala Ser Gly His	Ser Ser Gly Phe Ser Gly	275	280	285
Leu Cys Gly Ala	Leu Phe Ile Thr Phe	Gly Ile Leu Gly Ala Leu	290	295	300
Ala Leu Gly Pro	Tyr Val Asp Arg Thr	Lys His Phe Thr Glu Ala	305	310	315
Thr Lys Ile Gly	Leu Cys Leu Phe Ser	Leu Ala Cys Val Pro Phe	320	325	330
Ala Leu Val Ser	Gln Leu Gln Gly Gln	Thr Leu Ala Leu Ala Ala	335	340	345
Thr Cys Ser Leu	Leu Gly Leu Phe Gly	Phe Ser Val Gly Pro Val	350	355	360
Ala Met Glu Leu	Ala Val Glu Cys Ser	Phe Pro Val Gly Glu Gly	365	370	375
Ala Ala Thr Gly	Met Ile Phe Val Leu	Gly Gln Ala Glu Gly Ile	380	385	390
Leu Ile Met Leu	Ala Met Thr Ala Leu	Thr Val Arg Arg Ser Glu	395	400	405
Pro Ser Leu Ser	Thr Cys Gln Gln Gly	Glu Asp Pro Leu Asp Trp	410	415	420
Thr Val Ser Leu	Leu Leu Met Ala Gly	Leu Cys Thr Phe Phe Ser	425	430	435
Cys Ile Leu Ala	Val Phe Phe His Thr	Pro Tyr Arg Arg Leu Gln	440	445	450
Ala Glu Ser Gly	Glu Pro Pro Ser Thr	Arg Asn Ala Val Gly Gly	455	460	465
Ala Asp Ser Gly	Pro Gly Val Asp Arg	Gly Gly Ala Gly Arg Ala	470	475	480
Gly Val Leu Gly	Pro Ser Thr Ala Thr	Pro Glu Cys Thr Ala Arg	485	490	495
Gly Ala Ser Leu	Glu Asp Pro Arg Gly	Pro Gly Ser Pro His Pro	500	505	510
Ala Cys His Arg	Ala Thr Pro Arg Ala	Gln Gly Pro Ala Ala Thr	515	520	525
Asp Ala Pro Ser	Arg Pro Gly Arg Leu	Ala Gly Arg Val Gln Ala	530	535	540

Ser Arg Phe Ile Asp Pro Ala Gly Ser His Ser Ser Phe Ser Ser  
545 550 555

Pro Trp Val Ile Thr  
560

<210> 421

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 421

agcttctcag ccctcctgga gcag 24

<210> 422

<211> 25

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 422

cgggtcaata aacctggacg cttgg 25

<210> 423

<211> 43

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 423

tatgtggacc ggaccaagca cttcactgag gccaccaaga ttg 43

<210> 424

<211> 4313

<212> DNA

<213> Homo sapiens

<400> 424

gtccacatc ctgctcaact gggtcaggtc cctcttagac cagctcttgt 50

ccatcatttg ctgaagtgga ccaactagtt cccagtagg gggctctccc 100

tggcaattct tgatcggcgt ttggacatct cagatcgctt ccaatgaaga 150

tggccttgcc ttggggctct gcttgtttca taatcatcta actatgggac 200

aaggttgtgc cggcagctct gggggaagga gcacggggct gatcaagcca 250

tccaggaaac actggaggac ttgtccagcc ttgaaagaac tctagtgggt 300



tctgaatcta gccacttgg cggtaaagcat gatgcaactt ctgcaacttc 350  
tgctggggct tttggggcca ggtggctact tatttctttt aggggattgt 400  
caggaggtga ccactctcac ggtgaaatac caagtgtcag aggaagtgcc 450  
atctggtaca gtgatcgga agctgtcca ggaactgggc cgggaggaga 500  
ggcggaggca agctggggcc gccttcagg tgttcagct gcctcaggcg 550  
ctccccattc aggtggactc tgaggaaggc ttgctcagca caggcaggcg 600  
gctggatcga gagcagctgt gcgacagtg ggatccctgc ctggtttct 650  
ttgatgtgct tgccacaggg gatttggtc tgatccatgt ggagatccaa 700  
gtgctggaca tcaatgacca ccagccacgg tttcccaaag gcgagcagga 750  
gctggaaatc tctgagagcg cctctctgcg aaccggatc cccctggaca 800  
gagctcttga ccagacaca ggccctaaca ccctgcacac ctacactctg 850  
tctcccagtg agcactttgc cttggatgtc attgtgggccc ctgatgagac 900  
caaacatgca gaactcatag tggatgaagga gctggacagg gaaatccatt 950  
cattttttga tctggtgtta actgcctatg acaatgggaa ccccccaag 1000  
tcaggtacca gcttgggtcaa ggtcaacgtc ttggactcca atgacaatag 1050  
ccctgcgttt gctgagagtt cactggcact ggaaatccaa gaagatgctg 1100  
cacctggtac gcttctcata aaactgaccg ccacagacc tgaccaaggc 1150  
cccaatgggg aggtggagtt cttcctcagt aagcacatgc ctccagaggt 1200  
gctggacacc ttcagtattg atgccaagac aggccaggtc attctgcgtc 1250  
gacctctaga ctatgaaaag aaccctgcct acgaggtgga tgttcaggca 1300  
agggacctgg gtcccaatcc tatccagcc cattgcaaag ttctcatcaa 1350  
ggttctggat gtcaatgaca acatcccaag catccacgtc acatgggcct 1400  
cccagccatc actggtgtca gaagctcttc ccaaggacag ttttattgct 1450  
cttgtcatgg cagatgactt ggattcagga cacaatggtt tggtcactg 1500  
ctggctgagc caagagctgg gccacttcag gctgaaaaga actaatggca 1550  
acacatacat gttgctaacc aatgccacac tggacagaga gcagtggccc 1600  
aaatataccc tcaactctgtt agccaagac caaggactcc agcccttctc 1650  
agccaagaaa cagctcagca ttcagatcag tgacatcaac gacaatgcac 1700

ctgtgtttga gaaaagcagg tatgaagtct ccacgcggga aaacaactta 1750  
ccctctcttc acctcattac catcaaggct catgatgcag acttgggcat 1800  
taatggaaaa gtctcatacc gcatccagga ctccccagtt gctcacttag 1850  
tagctattga ctccaacaca ggagagggtca ctgctcagag gtcactgaac 1900  
tatgaagaga tggccggctt tgagttccag gtgatcgag aggacagcgg 1950  
gcaacccatg cttgcatcca gtgtctctgt gtgggtcagc ctcttgatg 2000  
ccaatgataa tgccccagag gtgtccagc ctgtgctcag cgatggaaaa 2050  
gccagcctct ccgtgcttgt gaatgcctcc acaggccacc tgcctgggtgc 2100  
catcgagact cccaatggct tgggccagc gggcactgac acacctccac 2150  
tggccactca cagctcccgg ccattccttt tgacaacat tgtggcaaga 2200  
gatgcagact cgggggcaaa tggagagccc ctctacagca tccgcaatgg 2250  
aaatgaagcc cacctcttca tcctcaacct tcatacgggg cagctgttcg 2300  
tcaatgtcac caatgccagc agcctcattg ggagtgagt ggagctggag 2350  
atagtagtag aggaccagg aagccccccc ttacagacct gagccctgtt 2400  
gagggtcagt tttgtcacca gtgtggacca cctgagggac tcagcccga 2450  
agcctggggc cttgagcatg tcgatgctga cggatgatct cctggctgta 2500  
ctgttgggca tcttcgggtt gatcctggct ttgttcattg ccattctgccg 2550  
gacagaaaag aaggacaaca gggcctacaa ctgtcgggag gccagatcca 2600  
cctaccgcca gcagcccaag agggccaga aacacattca gaaggcagac 2650  
atccacctcg tgcctgtgct caggggtcag gcagggtgag cttgtgaagt 2700  
cgggcagtcc caciaagatg tggacaagga ggcgatgat gaagcaggct 2750  
gggacccctg cctgcaggcc cccttcacc tcaccccgac cctgtacagg 2800  
acgctgcgta atcaaggcaa ccaggagca ccggcggaga gccagagagt 2850  
gctgcaagac acggtcaacc tccttttcaa ccatcccagg cagaggaatg 2900  
cctcccgga gaacctgaac ctcccgagc ccagcctgc cacaggccag 2950  
ccacgttcca ggcctctgaa ggttgaggc agccccacag ggaggctggc 3000  
tggagaccag ggcagtgagg aagccccaca gaggccacca gcctcctctg 3050  
caaccctgag acggcagcga catctcaatg gcaaagtgtc ccctgagaaa 3100  
gaatcagggc cccgtcagat cctgcggagc ctggtccggc tgtctgtggc 3150

tgccttcgcc gagcggaacc ccgtggagga gctcaactgtg gattctcctc 3200  
 ctgttcagca aatctcccag ctgctgtcct tgctgcatca gggccaattc 3250  
 cagcccaaac caaaccaccg aggaaataag tacttgGCCa agccaggagg 3300  
 cagcaggagt gcaatcccag acacagatgg cccaagtGca agggctggag 3350  
 gccagacaga cccagaacag gaggaagggc ctttgGatcc tgaagaggac 3400  
 ctctctgtga agcaactgct agaagaagag ctgtcaagtc tgctggaccc 3450  
 cagcacaggt ctggccctgg accggtgag cgccctgac cgggctgga 3500  
 tggcgagact ctctttgcc ctcaccacca actaccgtga caatgtgatc 3550  
 tccccggatg ctgcagccac ggaggagccg aggaccttcc agacgttcgg 3600  
 caaggcagag gcaccagagc tgagcccaac aggcacgagg ctggccagca 3650  
 cctttgtctc ggagatgagc tcaactgctg agatgctgct ggaacagcgc 3700  
 tccagcatgc ccgtggaggc cgcctccgag gcgctgcggc ggctctcggt 3750  
 ctgcgggagg accctcagtt tagacttggc caccagtGca gcctcaggca 3800  
 tgaaagtGca aggggaccca ggtggaaaga cggggactga gggcaagagc 3850  
 agaggcagca gcagcagcag caggtgcctg tgaacatacc tcagacgcct 3900  
 ctggatccaa gaaccagggg cctgaggatc tgtggacaag agctggtttc 3950  
 taaaatcttg taactcacta gctagcggcg gcctgagaac tttagggtga 4000  
 ctgatgctac cccacagag gaggcaagag cccaggact aacagctgac 4050  
 tgaccaaaGc agccccttgt aagcagctct gagtcttttg gaggacaggg 4100  
 acggtttgtg gctgagataa gtgtttcctg gcaaaacata tgtggagcac 4150  
 aaagggtcag tcctctggca gaacagatgc cacggagtat cacaggcagg 4200  
 aaagggtgGc cttcttgggt agcaggagtc agggggctgt accctggggg 4250  
 tgccaggaaa tgctctctga cctatcaata aaggaaaagc agtaaaaaaa 4300  
 aaaaaaaaaa aaa 4313

<210> 425

<211> 1184

<212> PRT

<213> Homo sapiens

<400> 425

Met Met Gln Leu Leu Gln Leu Leu Leu Gly Leu Leu Gly Pro Gly

1

5

10

15

Gly Tyr Leu Phe	Leu Leu Gly Asp Cys	Gln Glu Val Thr Thr	Leu
	20	25	30
Thr Val Lys Tyr	Gln Val Ser Glu Glu	Val Pro Ser Gly Thr	Val
	35	40	45
Ile Gly Lys Leu	Ser Gln Glu Leu Gly	Arg Glu Glu Arg Arg	Arg
	50	55	60
Gln Ala Gly Ala	Ala Phe Gln Val Leu	Gln Leu Pro Gln Ala	Leu
	65	70	75
Pro Ile Gln Val	Asp Ser Glu Glu Gly	Leu Leu Ser Thr Gly	Arg
	80	85	90
Arg Leu Asp Arg	Glu Gln Leu Cys Arg	Gln Trp Asp Pro Cys	Leu
	95	100	105
Val Ser Phe Asp	Val Leu Ala Thr Gly	Asp Leu Ala Leu Ile	His
	110	115	120
Val Glu Ile Gln	Val Leu Asp Ile Asn	Asp His Gln Pro Arg	Phe
	125	130	135
Pro Lys Gly Glu	Gln Glu Leu Glu Ile	Ser Glu Ser Ala Ser	Leu
	140	145	150
Arg Thr Arg Ile	Pro Leu Asp Arg Ala	Leu Asp Pro Asp Thr	Gly
	155	160	165
Pro Asn Thr Leu	His Thr Tyr Thr Leu	Ser Pro Ser Glu His	Phe
	170	175	180
Ala Leu Asp Val	Ile Val Gly Pro Asp	Glu Thr Lys His Ala	Glu
	185	190	195
Leu Ile Val Val	Lys Glu Leu Asp Arg	Glu Ile His Ser Phe	Phe
	200	205	210
Asp Leu Val Leu	Thr Ala Tyr Asp Asn	Gly Asn Pro Pro Lys	Ser
	215	220	225
Gly Thr Ser Leu	Val Lys Val Asn Val	Leu Asp Ser Asn Asp	Asn
	230	235	240
Ser Pro Ala Phe	Ala Glu Ser Ser Leu	Ala Leu Glu Ile Gln	Glu
	245	250	255
Asp Ala Ala Pro	Gly Thr Leu Leu Ile	Lys Leu Thr Ala Thr	Asp
	260	265	270
Pro Asp Gln Gly	Pro Asn Gly Glu Val	Glu Phe Phe Leu Ser	Lys
	275	280	285
His Met Pro Pro	Glu Val Leu Asp Thr	Phe Ser Ile Asp Ala	Lys
	290	295	300

Thr Gly Gln Val	Ile Leu Arg Arg Pro	Leu Asp Tyr Glu Lys Asn
305		315
Pro Ala Tyr Glu	Val Asp Val Gln Ala Arg Asp Leu Gly Pro Asn	
320		330
Pro Ile Pro Ala	His Cys Lys Val Leu Ile Lys Val Leu Asp Val	
335		345
Asn Asp Asn Ile	Pro Ser Ile His Val Thr Trp Ala Ser Gln Pro	
350		360
Ser Leu Val Ser	Glu Ala Leu Pro Lys Asp Ser Phe Ile Ala Leu	
365		375
Val Met Ala Asp	Asp Leu Asp Ser Gly His Asn Gly Leu Val His	
380		390
Cys Trp Leu Ser	Gln Glu Leu Gly His Phe Arg Leu Lys Arg Thr	
395		405
Asn Gly Asn Thr	Tyr Met Leu Leu Thr Asn Ala Thr Leu Asp Arg	
410		420
Glu Gln Trp Pro	Lys Tyr Thr Leu Thr Leu Leu Ala Gln Asp Gln	
425		435
Gly Leu Gln Pro	Leu Ser Ala Lys Lys Gln Leu Ser Ile Gln Ile	
440		450
Ser Asp Ile Asn	Asp Asn Ala Pro Val Phe Glu Lys Ser Arg Tyr	
455		465
Glu Val Ser Thr	Arg Glu Asn Asn Leu Pro Ser Leu His Leu Ile	
470		480
Thr Ile Lys Ala	His Asp Ala Asp Leu Gly Ile Asn Gly Lys Val	
485		495
Ser Tyr Arg Ile	Gln Asp Ser Pro Val Ala His Leu Val Ala Ile	
500		510
Asp Ser Asn Thr	Gly Glu Val Thr Ala Gln Arg Ser Leu Asn Tyr	
515		525
Glu Glu Met Ala	Gly Phe Glu Phe Gln Val Ile Ala Glu Asp Ser	
530		540
Gly Gln Pro Met	Leu Ala Ser Ser Val Ser Val Trp Val Ser Leu	
545		555
Leu Asp Ala Asn	Asp Asn Ala Pro Glu Val Val Gln Pro Val Leu	
560		570
Ser Asp Gly Lys	Ala Ser Leu Ser Val Leu Val Asn Ala Ser Thr	
575		585

Gly His Leu Leu Val	Pro Ile Glu Thr	Pro Asn Gly Leu Gly	Pro
590		595	600
Ala Gly Thr Asp Thr	Pro Pro Leu Ala	Thr His Ser Ser Arg	Pro
605		610	615
Phe Leu Leu Thr Thr	Ile Val Ala Arg	Asp Ala Asp Ser Gly	Ala
620		625	630
Asn Gly Glu Pro Leu	Tyr Ser Ile Arg	Asn Gly Asn Glu Ala	His
635		640	645
Leu Phe Ile Leu Asn	Pro His Thr Gly	Gln Leu Phe Val Asn	Val
650		655	660
Thr Asn Ala Ser Ser	Leu Ile Gly Ser	Glu Trp Glu Leu Glu	Ile
665		670	675
Val Val Glu Asp Gln	Gly Ser Pro Pro	Leu Gln Thr Arg Ala	Leu
680		685	690
Leu Arg Val Met Phe	Val Thr Ser Val	Asp His Leu Arg Asp	Ser
695		700	705
Ala Arg Lys Pro Gly	Ala Leu Ser Met	Ser Met Leu Thr Val	Ile
710		715	720
Cys Leu Ala Val Leu	Leu Gly Ile Phe	Gly Leu Ile Leu Ala	Leu
725		730	735
Phe Met Ser Ile Cys	Arg Thr Glu Lys	Lys Asp Asn Arg Ala	Tyr
740		745	750
Asn Cys Arg Glu Ala	Glu Ser Thr Tyr	Arg Gln Gln Pro Lys	Arg
755		760	765
Pro Gln Lys His Ile	Gln Lys Ala Asp	Ile His Leu Val Pro	Val
770		775	780
Leu Arg Gly Gln Ala	Gly Glu Pro Cys	Glu Val Gly Gln Ser	His
785		790	795
Lys Asp Val Asp Lys	Glu Ala Met Met	Glu Ala Gly Trp Asp	Pro
800		805	810
Cys Leu Gln Ala Pro	Phe His Leu Thr	Pro Thr Leu Tyr Arg	Thr
815		820	825
Leu Arg Asn Gln Gly	Asn Gln Gly Ala	Pro Ala Glu Ser Arg	Glu
830		835	840
Val Leu Gln Asp Thr	Val Asn Leu Leu	Phe Asn His Pro Arg	Gln
845		850	855
Arg Asn Ala Ser Arg	Glu Asn Leu Asn	Leu Pro Glu Pro Gln	Pro
860		865	870

Ala Thr Gly Gln Pro Arg Ser Arg Pro Leu Lys Val Ala Gly Ser	875	880	885
Pro Thr Gly Arg Leu Ala Gly Asp Gln Gly Ser Glu Glu Ala Pro	890	895	900
Gln Arg Pro Pro Ala Ser Ser Ala Thr Leu Arg Arg Gln Arg His	905	910	915
Leu Asn Gly Lys Val Ser Pro Glu Lys Glu Ser Gly Pro Arg Gln	920	925	930
Ile Leu Arg Ser Leu Val Arg Leu Ser Val Ala Ala Phe Ala Glu	935	940	945
Arg Asn Pro Val Glu Glu Leu Thr Val Asp Ser Pro Pro Val Gln	950	955	960
Gln Ile Ser Gln Leu Leu Ser Leu Leu His Gln Gly Gln Phe Gln	965	970	975
Pro Lys Pro Asn His Arg Gly Asn Lys Tyr Leu Ala Lys Pro Gly	980	985	990
Gly Ser Arg Ser Ala Ile Pro Asp Thr Asp Gly Pro Ser Ala Arg	995	1000	1005
Ala Gly Gly Gln Thr Asp Pro Glu Gln Glu Glu Gly Pro Leu Asp	1010	1015	1020
Pro Glu Glu Asp Leu Ser Val Lys Gln Leu Leu Glu Glu Glu Leu	1025	1030	1035
Ser Ser Leu Leu Asp Pro Ser Thr Gly Leu Ala Leu Asp Arg Leu	1040	1045	1050
Ser Ala Pro Asp Pro Ala Trp Met Ala Arg Leu Ser Leu Pro Leu	1055	1060	1065
Thr Thr Asn Tyr Arg Asp Asn Val Ile Ser Pro Asp Ala Ala Ala	1070	1075	1080
Thr Glu Glu Pro Arg Thr Phe Gln Thr Phe Gly Lys Ala Glu Ala	1085	1090	1095
Pro Glu Leu Ser Pro Thr Gly Thr Arg Leu Ala Ser Thr Phe Val	1100	1105	1110
Ser Glu Met Ser Ser Leu Leu Glu Met Leu Leu Glu Gln Arg Ser	1115	1120	1125
Ser Met Pro Val Glu Ala Ala Ser Glu Ala Leu Arg Arg Leu Ser	1130	1135	1140
Val Cys Gly Arg Thr Leu Ser Leu Asp Leu Ala Thr Ser Ala Ala	1145	1150	1155

Ser Gly Met Lys Val Gln Gly Asp Pro Gly Gly Lys Thr Gly Thr  
1160 1165 1170

Glu Gly Lys Ser Arg Gly Ser Ser Ser Ser Arg Cys Leu  
1175 1180

<210> 426

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 426

gtaagcacat gcctccagag gtgc 24

<210> 427

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 427

gtgacgtgga tgcttgggat gttg 24

<210> 428

<211> 50

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 428

tggacacctt cagtattgat gccaaagacag gccaggtcat tctgcgtcga 50

<210> 429

<211> 2037

<212> DNA

<213> Homo sapiens

<400> 429

cggacgcgtg ggcggacgcg tgggggagag ccgcagtccc ggctgcagca 50

cctgggagaa ggcagaccgt gtgagggggc ctgtggcccc agcgtgctgt 100

ggcctcgggg agtgggaagt ggaggcagga gccttacctta cacttcgcca 150

tgagtttccct catcgactcc agcatcatga ttacctcca gatactattt 200

tttgatttg ggtggctttt cttcatgcgc caattgttta aagactatga 250

gatacgtcag tatgtgttac aggtgatctt ctccgtgacg tttgcatttt 300



cttgacccat gtttgagctc atcatctttg aaatcttagg agtattgaat 350  
agcagctccc gttattttca ctggaaaatg aacctgtgtg taattctgct 400  
gacccctggtt ttcattggtgc ctttttacat tggctatttt attgtgagca 450  
atatccgact actgcataaa caacgactgc ttttttctg tctcttatgg 500  
ctgaccttta tgtatttctt ctggaaacta ggagatccct tccccattct 550  
cagcccaaaa catgggatct tatccataga acagctcatc agccgggttg 600  
gtgtgattgg agtgactctc atggctcttc tttctggatt tgggtgctgc 650  
aactgcccac acatttacat gtcttacttc ctcaggaatg tgactgacac 700  
ggatattcta gccctggaac ggcgactgct gcaaaccatg gatatgatca 750  
taagcaaaaa gaaaaggatg gcaatggcac ggagaacaat gttccagaag 800  
ggggaagtgc ataacaaacc atcaggtttc tggggaatga taaaagtgt 850  
taccattca gcatcaggaa gtgaaaatct tactcttatt caacaggaag 900  
tggatgcttt ggaagaatta agcaggcagc tttttctgga aacagctgat 950  
ctatatgcta ccaaggagag aatagaatac tccaaaacct tcaaggggaa 1000  
atattttaat tttcttggtt actttttctc tatttactgt gtttggaata 1050  
ttttcatggc taccatcaat attgtttttg atcgagtgg gaaaacggat 1100  
cctgtcacia gaggcattga gatcactgtg aattatctgg gaatccaatt 1150  
tgatgtgaag ttttggtccc aacacatttc cttcattctt gttggaataa 1200  
tcatcgtcac atccatcaga ggattgctga tcactcttac caagttcttt 1250  
tatgccatct ctagcagtaa gtcctccaat gtcattgtcc tgctattagc 1300  
acagataatg ggcattgact ttgtctctc tgtgctgctg atccgaatga 1350  
gtatgccttt agaataccgc accataatca ctgaagtcct tggagaactg 1400  
cagttcaact tctatcacgc ttggtttgat gtgatcttcc tggtcagcgc 1450  
tctctctagc atactcttcc tctatttggc tcacaaacag gcaccagaga 1500  
agcaaatggc accttgaact taagcctact acagactgtt agaggccagt 1550  
ggtttcaaaa tttagatata agagggggga aaaatggaac cagggcctga 1600  
cattttataa acaacaaaa tgctatggta gcatttttca cttcatagc 1650  
atactccttc cccgtcaggt gatactatga ccatgagtag catcagccag 1700

aacatgagag ggagaactaa ctcaagacaa tactcagcag agagcatccc 1750  
 gtgtggatat gaggctggtg tagaggcgga gaggagccaa gaaactaaag 1800  
 gtgaaaaata cactggaact ctggggcaag acatgtctat ggtagctgag 1850  
 ccaaacacgt aggtttccg ttttaaggtt cacatggaaa aggttatagc 1900  
 tttgccttga gattgactca ttaaaatcag agactgtaac aaaaaaaaaa 1950  
 aaaaaaaaaa agggcgggcg cgactctaga gtcgacctgc agaagcttgg 2000  
 cggccatggc ccaacttggt tattgcagct tataatg 2037

<210> 430

<211> 455

<212> PRT

<213> Homo sapiens

<400> 430

Met	Ser	Phe	Leu	Ile	Asp	Ser	Ser	Ile	Met	Ile	Thr	Ser	Gln	Ile	1	5	10	15
Leu	Phe	Phe	Gly	Phe	Gly	Trp	Leu	Phe	Phe	Met	Arg	Gln	Leu	Phe	20	25	30	
Lys	Asp	Tyr	Glu	Ile	Arg	Gln	Tyr	Val	Val	Gln	Val	Ile	Phe	Ser	35	40	45	
Val	Thr	Phe	Ala	Phe	Ser	Cys	Thr	Met	Phe	Glu	Leu	Ile	Ile	Phe	50	55	60	
Glu	Ile	Leu	Gly	Val	Leu	Asn	Ser	Ser	Ser	Arg	Tyr	Phe	His	Trp	65	70	75	
Lys	Met	Asn	Leu	Cys	Val	Ile	Leu	Leu	Ile	Leu	Val	Phe	Met	Val	80	85	90	
Pro	Phe	Tyr	Ile	Gly	Tyr	Phe	Ile	Val	Ser	Asn	Ile	Arg	Leu	Leu	95	100	105	
His	Lys	Gln	Arg	Leu	Leu	Phe	Ser	Cys	Leu	Leu	Trp	Leu	Thr	Phe	110	115	120	
Met	Tyr	Phe	Phe	Trp	Lys	Leu	Gly	Asp	Pro	Phe	Pro	Ile	Leu	Ser	125	130	135	
Pro	Lys	His	Gly	Ile	Leu	Ser	Ile	Glu	Gln	Leu	Ile	Ser	Arg	Val	140	145	150	
Gly	Val	Ile	Gly	Val	Thr	Leu	Met	Ala	Leu	Leu	Ser	Gly	Phe	Gly	155	160	165	
Ala	Val	Asn	Cys	Pro	Tyr	Thr	Tyr	Met	Ser	Tyr	Phe	Leu	Arg	Asn	170	175	180	
Val	Thr	Asp	Thr	Asp	Ile	Leu	Ala	Leu	Glu	Arg	Arg	Leu	Leu	Gln				

	185		190		195
Thr Met Asp Met	Ile Ile Ser Lys Lys	Lys Arg Met Ala Met	Ala		
	200		205		210
Arg Arg Thr Met	Phe Gln Lys Gly Glu	Val His Asn Lys Pro	Ser		
	215		220		225
Gly Phe Trp Gly	Met Ile Lys Ser Val	Thr Thr Ser Ala Ser	Gly		
	230		235		240
Ser Glu Asn Leu	Thr Leu Ile Gln Gln	Glu Val Asp Ala Leu	Glu		
	245		250		255
Glu Leu Ser Arg	Gln Leu Phe Leu Glu	Thr Ala Asp Leu Tyr	Ala		
	260		265		270
Thr Lys Glu Arg	Ile Glu Tyr Ser Lys	Thr Phe Lys Gly Lys	Tyr		
	275		280		285
Phe Asn Phe Leu	Gly Tyr Phe Phe Ser	Ile Tyr Cys Val Trp	Lys		
	290		295		300
Ile Phe Met Ala	Thr Ile Asn Ile Val	Phe Asp Arg Val Gly	Lys		
	305		310		315
Thr Asp Pro Val	Thr Arg Gly Ile Glu	Ile Thr Val Asn Tyr	Leu		
	320		325		330
Gly Ile Gln Phe	Asp Val Lys Phe Trp	Ser Gln His Ile Ser	Phe		
	335		340		345
Ile Leu Val Gly	Ile Ile Ile Val Thr	Ser Ile Arg Gly Leu	Leu		
	350		355		360
Ile Thr Leu Thr	Lys Phe Phe Tyr Ala	Ile Ser Ser Ser Lys	Ser		
	365		370		375
Ser Asn Val Ile	Val Leu Leu Leu Ala	Gln Ile Met Gly Met	Tyr		
	380		385		390
Phe Val Ser Ser	Val Leu Leu Ile Arg	Met Ser Met Pro Leu	Glu		
	395		400		405
Tyr Arg Thr Ile	Ile Thr Glu Val Leu	Gly Glu Leu Gln Phe	Asn		
	410		415		420
Phe Tyr His Arg	Trp Phe Asp Val Ile	Phe Leu Val Ser Ala	Leu		
	425		430		435
Ser Ser Ile Leu	Phe Leu Tyr Leu Ala	His Lys Gln Ala Pro	Glu		
	440		445		450
Lys Gln Met Ala	Pro				
	455				

<210> 431

<211> 407  
<212> DNA  
<213> Homo sapiens

<220>  
<221> unsure  
<222> 78, 81, 113, 157, 224, 297  
<223> unknown base

<400> 431  
catgggaagt ggagccggag ccttccttac actcgccatg agtttcctca 50  
tcgactccag catcatgatt acctcccnga nactatTTTT tggatttggg 100  
tggcttttct tcngcgccaa tgtttaaaga ctatgagata cgtcagtatg 150  
ttgtacnggt gatcttctcc gtgacgtttg ccatttcttg caccatgttt 200  
gagctcatca tctttgaaat cttnggagta ttgaatagca gctcccgta 250  
ttttcactgg aaaatgaacc tgtgtgtaat tctgctgac ctggttntca 300  
tgggtgccttt ttacattggc tattttattg tgagcaatat ccgactactg 350  
cataaacaac gactgctttt ttcctgtctc ttatggctga cctttatgta 400  
tttcag 407

<210> 432  
<211> 457  
<212> DNA  
<213> Homo sapiens

<220>  
<221> unsure  
<222> 31, 66, 81-82, 84, 122, 184, 187, 232, 241, 400, 424, 427, 434  
<223> unknown base

<400> 432  
gtgttgccct tggggagggg aaggggagcc nggcccttc ctaaaatttg 50  
gccaaagggtt tctttnttga attccgggtt nn̄gnatacct tcccagaaaa 100  
tatttttttg atttggggta gnttttttcc atgcgccaat tgtttaaaga 150  
ctatgagata cgtcagtatg ttgtacaggt gatnttntcc gtgacgtttg 200  
cattttcttg caccatgttt gagctcatca tntttgaaat nttaggagta 250  
ttgaatagca gctcccgta ttttactgg aaaatgaacc tgtgtgtaat 300  
tctgctgac ctggttttca tgggtgccttt ttacattggc tattttattg 350  
tgagcaatat ccgactactg cataaacaac gactgctttt ttcctgtctn 400  
ttatggctga cctttatgta tttntnttgg aaantaggag atccctttcc 450

cattctc 457

<210> 433

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 433

aagtggagcc ggagccttcc 20

<210> 434

<211> 22

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 434

tcgttggtta tgcagtagtc gg 22

<210> 435

<211> 41

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 435

attgtttaaa gactatgaga tacgtcagta tggtgtacag g 41

<210> 436

<211> 3951

<212> DNA

<213> Homo sapiens

<400> 436

ctcgcgagg gatcgccca tggccggggc tcggagccgc gacccttggg 50

gggcctccgg gatttgctac ctttttggtt ccctgctcgt cgaactgctc 100

ttctcacggg ctgtcgcctt caatctggac gtgatgggtg ccttgcgcaa 150

ggagggcgag ccaggcagcc tcttcggctt ctctgtggcc ctgcaccggc 200

agttgcagcc ccgaccccag agctggctgc tgggtgggtgc tcccaggcc 250

ctggctcttc ctgggcagca ggcgaaatgc actggaggcc tcttcgcttg 300

cccgttgagc ctggaggaga ctgactgcta cagagtggac atcgaccagg 350

gagctgatat gcaaaaggaa agcaaggaga accagtgggtt gggagtcagt 400

gttcggagcc aggggcctgg gggcaagatt gttacctgtg cacaccgata 450  
tgaggcaagg cagcgagtgg accagatcct ggagacgcgg gatatgattg 500  
gtcgtgtctt tgtgtcagc caggacctgg ccatccggga tgagttggat 550  
ggtggggaat ggaagttctg tgagggacgc cccaaggcc atgaacaatt 600  
tggtttctgc cagcagggca cagctgccgc cttctcccct gatagccact 650  
acctcctctt tggggcccca ggaacctata attggaaggg cacggccagg 700  
gtggagctct gtgcacaggg ctgacgggac ctggcacacc tggacgacgg 750  
tccctacgag gcggggggag agaaggagca ggacccccgc ctcatcccgg 800  
tccctgccaa cagctacttt ggcttctcta ttgactcggg gaaaggctctg 850  
gtgctgtcag aagagctgag ctttgtggct ggagcccccc gcgccaacca 900  
caagggtgct gtggctcatc tgcgcaagga cagcgccagt cgcttggctg 950  
ccgaggttat gctgtctggg gagcgcctga cctccggctt tggctactca 1000  
ctggctgtgg ctgacctcaa cagtgatggc tggccagacc tgatagtggg 1050  
tgccccctac ttctttgagc gccaagaaga gctggggggg gctgtgtatg 1100  
tgtacttgaa ccaggggggt cactgggctg ggatctcccc tctccggctc 1150  
tgcggtctcc ctgactccat gttcgggatc agcctggctg tcctggggga 1200  
cctcaaccaa gatggctttc cagatattgc agtgggtgcc ccctttgatg 1250  
gtgatgggaa agtcttcac taccatggga gcagcctggg ggttgtcgcc 1300  
aaaccttcac aggtgctgga gggcgaggct gtgggcatca agagcttcgg 1350  
ctactccctg tcaggcagct tggatatgga tgggaaccaa taccctgacc 1400  
tgctgggtgg ctccctggct gacaccgag tgctcttcag ggccagaccc 1450  
atcctccatg tctcccatga ggtctctatt gctccacgaa gcatcgacct 1500  
ggagcagccc aactgtgctg gcggccactc ggtctgtgtg gacctaaagg 1550  
tctgtttcag ctacattgca gtccccagca gctatagccc tactgtggcc 1600  
ctggactatg tgtagatgc ggacacagac cggaggctcc ggggcccagg 1650  
tccccgtgtg acgttcctga gccgtaacct ggaagaaccc aagcaccagg 1700  
cctcgggcac cgtgtggctg aagcaccagc atgaccgagt ctgtggagac 1750  
gccatgttcc agctccagga aaatgtcaaa gacaagcttc gggccattgt 1800  
agtgaccttg tcctacagtc tcagacccc tcggctccgg cgacaggctc 1850

ctggccaggg gctgcctcca gtggcccca tctcaatgc ccaccagccc 1900  
agcaccagc gggcagagat ccacttcctg aagcaaggct gtggtgaaga 1950  
caagatctgc cagagcaatc tgcagctggt ccacgcccgc ttctgtaccc 2000  
gggtcagcga caggaattc caacctctgc ccatggatgt ggatggaaca 2050  
acagccctgt ttgcactgag tgggcagcca gtcattggcc tggagctgat 2100  
ggtcaccaac ctgccatcgg acccagccca gccccaggct gatggggatg 2150  
atgcccatga agcccagctc ctggtcatgc ttctgactc actgcactac 2200  
tcaggggtcc gggccctgga cctgcggag aagccactct gcctgtccaa 2250  
tgagaatgcc tcccatgttg agtgtgagct ggggaacccc atgaagagag 2300  
gtgcccaggt caccttctac ctcatcctta gcacctccgg gatcagcatt 2350  
gagaccacgg aactggagggt agagctgctg ttggccacga tcagtgaaca 2400  
ggagctgcat ccagtctctg cagagccccg tgtcttcatt gagctgccac 2450  
tgtccattgc aggaatggcc attccccagc aactcttctt ctctggtgtg 2500  
gtgaggggag agagagccat gcagtctgag cgggatgtgg gcagcaagg 2550  
caagtatgag gtcacggttt ccaaccaagg ccagtcgctc agaaccctgg 2600  
gctctgcctt cctcaacatc atgtggcctc atgagattgc caatgggaag 2650  
tggttgctgt acccaatgca gggtgagctg gagggcgggc aggggcctgg 2700  
gcagaaaggg ctttgctctc ccaggcccaa catcctccac ctggatgtgg 2750  
acagtaggga taggaggcgg cgggagctgg agccacctga gcagcaggag 2800  
cctggtgagc ggcaggagcc cagcatgtcc tggtgccag tgtcctctgc 2850  
tgagaagaag aaaaacatca ccctggactg cggccgggac acggccaact 2900  
gtgtggtgtt cagctgcca ctctacagct ttgaccgcgc ggctgtgctg 2950  
catgtctggg gccgtctctg gaacagcacc tttctggagg agtactcagc 3000  
tgtgaagtcc ctggaagtga ttgtccgggc caacatcaca gtgaagtcct 3050  
ccataaagaa cttgatgctc cgagatgcct ccacagtgat ccagtgatg 3100  
gtatacttgg accccatggc tgtggtggca gaaggagtgc cctggtgggt 3150  
catcctctctg gctgtactgg ctgggctgct ggtgctagca ctgctggtgc 3200  
tgctcctgtg gaagatggga ttcttcaaac gggcgaagca cccgaggcc 3250

accgtgcccc agtaccatgc ggtgaagatt cctcgggaag accgacagca 3300  
 gttcaaggag gagaagacgg gcaccatcct gaggaacaac tggggcagcc 3350  
 cccggcgagg gggcccgat gcacaccca tcctggctgc tgacgggcat 3400  
 cccgagctgg gccccgatgg gcatccaggg ccaggcacccg cctagggtcc 3450  
 catgtcccag cctggcctgt ggctgcctc catcccttcc ccagagatgg 3500  
 ctcttgga tgaagagggg agagtgggct gctgggtgcg catcaagatt 3550  
 tggcaggatc ggcttcctca ggggcacaga cctctccac ccacaagaac 3600  
 tcctcccacc caacttcccc ttagagtgcg gtgagatgag agtgggtaaa 3650  
 tcagggacag ggccatgggg tagggtgaga agggcagggg tgcctgatg 3700  
 caaaggtggg gagaagggat cctaaccct tcctctocca ttcaccctgt 3750  
 gtaacaggac cccaaggacc tgcctccccg gaagtgcctt aacctagagg 3800  
 gtcggggagg aggttggtgc actgactcag gctgctcctt ctctagtctt 3850  
 ccctctcctc tgacctagt ttgctgcat cagtctagt gtttcgtggg 3900  
 ttctctatt tattaaaaa ttttgagaa caaaaaaaaa aaaaaaaaaa 3950

a 3951

<210> 437

<211> 1141

<212> PRT

<213> Homo sapiens

<400> 437

Met	Ala	Gly	Ala	Arg	Ser	Arg	Asp	Pro	Trp	Gly	Ala	Ser	Gly	Ile
1				5					10					15

Cys	Tyr	Leu	Phe	Gly	Ser	Leu	Leu	Val	Glu	Leu	Leu	Phe	Ser	Arg
				20					25					30

Ala	Val	Ala	Phe	Asn	Leu	Asp	Val	Met	Gly	Ala	Leu	Arg	Lys	Glu
				35					40					45

Gly	Glu	Pro	Gly	Ser	Leu	Phe	Gly	Phe	Ser	Val	Ala	Leu	His	Arg
				50					55					60

Gln	Leu	Gln	Pro	Arg	Pro	Gln	Ser	Trp	Leu	Leu	Val	Gly	Ala	Pro
				65					70					75

Gln	Ala	Leu	Ala	Leu	Pro	Gly	Gln	Gln	Ala	Asn	Arg	Thr	Gly	Gly
				80					85					90

Leu	Phe	Ala	Cys	Pro	Leu	Ser	Leu	Glu	Glu	Thr	Asp	Cys	Tyr	Arg
				95					100					105



Val Asp Ile Asp	Gln Gly Ala Asp Met	Gln Lys Glu Ser Lys Glu
110	115	120
Asn Gln Trp Leu	Gly Val Ser Val Arg Ser	Gln Gly Pro Gly Gly
125	130	135
Lys Ile Val Thr	Cys Ala His Arg Tyr Glu	Ala Arg Gln Arg Val
140	145	150
Asp Gln Ile Leu	Glu Thr Arg Asp Met Ile	Gly Arg Cys Phe Val
155	160	165
Leu Ser Gln Asp	Leu Ala Ile Arg Asp Glu	Leu Asp Gly Gly Glu
170	175	180
Trp Lys Phe Cys	Glu Gly Arg Pro Gln Gly	His Glu Gln Phe Gly
185	190	195
Phe Cys Gln Gln	Gly Thr Ala Ala Ala Phe	Ser Pro Asp Ser His
200	205	210
Tyr Leu Leu Phe	Gly Ala Pro Gly Thr Tyr	Asn Trp Lys Gly Thr
215	220	225
Ala Arg Val Glu	Leu Cys Ala Gln Gly Ser	Ala Asp Leu Ala His
230	235	240
Leu Asp Asp Gly	Pro Tyr Glu Ala Gly Gly	Glu Lys Glu Gln Asp
245	250	255
Pro Arg Leu Ile	Pro Val Pro Ala Asn Ser	Tyr Phe Gly Phe Ser
260	265	270
Ile Asp Ser Gly	Lys Gly Leu Val Arg Ala	Glu Glu Leu Ser Phe
275	280	285
Val Ala Gly Ala	Pro Arg Ala Asn His Lys	Gly Ala Val Val Ile
290	295	300
Leu Arg Lys Asp	Ser Ala Ser Arg Leu Val	Pro Glu Val Met Leu
305	310	315
Ser Gly Glu Arg	Leu Thr Ser Gly Phe Gly	Tyr Ser Leu Ala Val
320	325	330
Ala Asp Leu Asn	Ser Asp Gly Trp Pro Asp	Leu Ile Val Gly Ala
335	340	345
Pro Tyr Phe Phe	Glu Arg Gln Glu Glu Leu	Gly Gly Ala Val Tyr
350	355	360
Val Tyr Leu Asn	Gln Gly Gly His Trp Ala	Gly Ile Ser Pro Leu
365	370	375
Arg Leu Cys Gly	Ser Pro Asp Ser Met Phe	Gly Ile Ser Leu Ala
380	385	390

Val Leu Gly Asp	Leu Asn Gln Asp Gly	Phe Pro Asp Ile Ala Val	395	400	405
Gly Ala Pro Phe	Asp Gly Asp Gly Lys	Val Phe Ile Tyr His Gly	410	415	420
Ser Ser Leu Gly	Val Val Ala Lys Pro	Ser Gln Val Leu Glu Gly	425	430	435
Glu Ala Val Gly	Ile Lys Ser Phe Gly	Tyr Ser Leu Ser Gly Ser	440	445	450
Leu Asp Met Asp	Gly Asn Gln Tyr Pro	Asp Leu Leu Val Gly Ser	455	460	465
Leu Ala Asp Thr	Ala Val Leu Phe Arg	Ala Arg Pro Ile Leu His	470	475	480
Val Ser His Glu	Val Ser Ile Ala Pro	Arg Ser Ile Asp Leu Glu	485	490	495
Gln Pro Asn Cys	Ala Gly Gly His Ser	Val Cys Val Asp Leu Arg	500	505	510
Val Cys Phe Ser	Tyr Ile Ala Val Pro	Ser Ser Tyr Ser Pro Thr	515	520	525
Val Ala Leu Asp	Tyr Val Leu Asp Ala	Asp Thr Asp Arg Arg Leu	530	535	540
Arg Gly Gln Val	Pro Arg Val Thr Phe	Leu Ser Arg Asn Leu Glu	545	550	555
Glu Pro Lys His	Gln Ala Ser Gly Thr	Val Trp Leu Lys His Gln	560	565	570
His Asp Arg Val	Cys Gly Asp Ala Met	Phe Gln Leu Gln Glu Asn	575	580	585
Val Lys Asp Lys	Leu Arg Ala Ile Val	Val Thr Leu Ser Tyr Ser	590	595	600
Leu Gln Thr Pro	Arg Leu Arg Arg Gln	Ala Pro Gly Gln Gly Leu	605	610	615
Pro Pro Val Ala	Pro Ile Leu Asn Ala	His Gln Pro Ser Thr Gln	620	625	630
Arg Ala Glu Ile	His Phe Leu Lys Gln	Gly Cys Gly Glu Asp Lys	635	640	645
Ile Cys Gln Ser	Asn Leu Gln Leu Val	His Ala Arg Phe Cys Thr	650	655	660
Arg Val Ser Asp	Thr Glu Phe Gln Pro	Leu Pro Met Asp Val Asp	665	670	675

Gly Thr Thr Ala	Leu Phe Ala Leu Ser	Gly Gln Pro Val Ile Gly	680	685	690
Leu Glu Leu Met	Val Thr Asn Leu Pro	Ser Asp Pro Ala Gln Pro	695	700	705
Gln Ala Asp Gly	Asp Asp Ala His Glu	Ala Gln Leu Leu Val Met	710	715	720
Leu Pro Asp Ser	Leu His Tyr Ser Gly	Val Arg Ala Leu Asp Pro	725	730	735
Ala Glu Lys Pro	Leu Cys Leu Ser Asn	Glu Asn Ala Ser His Val	740	745	750
Glu Cys Glu Leu	Gly Asn Pro Met Lys	Arg Gly Ala Gln Val Thr	755	760	765
Phe Tyr Leu Ile	Leu Ser Thr Ser Gly	Ile Ser Ile Glu Thr Thr	770	775	780
Glu Leu Glu Val	Glu Leu Leu Leu Ala	Thr Ile Ser Glu Gln Glu	785	790	795
Leu His Pro Val	Ser Ala Arg Ala Arg	Val Phe Ile Glu Leu Pro	800	805	810
Leu Ser Ile Ala	Gly Met Ala Ile Pro	Gln Gln Leu Phe Phe Ser	815	820	825
Gly Val Val Arg	Gly Glu Arg Ala Met	Gln Ser Glu Arg Asp Val	830	835	840
Gly Ser Lys Val	Lys Tyr Glu Val Thr	Val Ser Asn Gln Gly Gln	845	850	855
Ser Leu Arg Thr	Leu Gly Ser Ala Phe	Leu Asn Ile Met Trp Pro	860	865	870
His Glu Ile Ala	Asn Gly Lys Trp Leu	Leu Tyr Pro Met Gln Val	875	880	885
Glu Leu Glu Gly	Gly Gln Gly Pro Gly	Gln Lys Gly Leu Cys Ser	890	895	900
Pro Arg Pro Asn	Ile Leu His Leu Asp	Val Asp Ser Arg Asp Arg	905	910	915
Arg Arg Arg Glu	Leu Glu Pro Pro Glu	Gln Gln Glu Pro Gly Glu	920	925	930
Arg Gln Glu Pro	Ser Met Ser Trp Trp	Pro Val Ser Ser Ala Glu	935	940	945
Lys Lys Lys Asn	Ile Thr Leu Asp Cys	Ala Arg Gly Thr Ala Asn	950	955	960

Cys Val Val Phe	Ser Cys Pro Leu Tyr	Ser Phe Asp Arg Ala Ala
965	970	975
Val Leu His Val	Trp Gly Arg Leu Trp Asn	Ser Thr Phe Leu Glu
980	985	990
Glu Tyr Ser Ala	Val Lys Ser Leu Glu Val	Ile Val Arg Ala Asn
995	1000	1005
Ile Thr Val Lys	Ser Ser Ile Lys Asn Leu	Met Leu Arg Asp Ala
1010	1015	1020
Ser Thr Val Ile	Pro Val Met Val Tyr Leu	Asp Pro Met Ala Val
1025	1030	1035
Val Ala Glu Gly	Val Pro Trp Trp Val Ile	Leu Leu Ala Val Leu
1040	1045	1050
Ala Gly Leu Leu	Val Leu Ala Leu Leu Val	Leu Leu Leu Trp Lys
1055	1060	1065
Met Gly Phe Phe	Lys Arg Ala Lys His Pro	Glu Ala Thr Val Pro
1070	1075	1080
Gln Tyr His Ala	Val Lys Ile Pro Arg Glu	Asp Arg Gln Gln Phe
1085	1090	1095
Lys Glu Glu Lys	Thr Gly Thr Ile Leu Arg	Asn Asn Trp Gly Ser
1100	1105	1110
Pro Arg Arg Glu	Gly Pro Asp Ala His Pro	Ile Leu Ala Ala Asp
1115	1120	1125
Gly His Pro Glu	Leu Gly Pro Asp Gly His	Pro Gly Pro Gly Thr
1130	1135	1140

Ala

<210> 438

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 438

ggctgacacc gcagtgtctt tcag 24

<210> 439

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 439

gctgctgggg actgcaatgt agct 24

<210> 440

<211> 46

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 440

catcctccat gtctcccatg aggtctctat tgctccacga agcatc 46

<210> 441

<211> 1964

<212> DNA

<213> Homo sapiens

<400> 441

cgcgccgggc gcagggagct gaggggacgg ctgcagacgg cggcgcgctgc 50  
agcagctcca gaaagcagcg agttggcaga gcagggctgc atttccagca 100  
ggagctgcga gcacagtgtt ggctcacaac aagatgctca aggtgtcagc 150  
cgtactgtgt gtgtgtgcag ccgcttgggtg cagtcagtct ctgcagctg 200  
ccgcggcggt ggctgcagcc ggggggcggt cggacggcgg taattttctg 250  
gatgataaac aatggctcac cacaatctct cagtatgaca aggaagtcgg 300  
acagtggaac aaattccgag acgaagtaga ggatgattat ttccgcactt 350  
ggagtccagg aaaacccttc gatcaggctt tagatccagc taaggatcca 400  
tgcttaaaga tgaaatgtag tcgccataaa gtatgcattg ctcaagattc 450  
tcagactgca gtctgcatta gtcaccggag gcttacacac aggatgaaag 500  
aagcaggagt agaccatagg cagtggaggg gtcccatatt atccacctgc 550  
aagcagtgcc cagtgggtcta tcccagccct gtttgtgggt cagatgggtca 600  
tacctactct ttccagtgc aactagaata tcaggcatgt gtcttaggaa 650  
aacagatctc agtcaaattgt gaaggacatt gcccatgtcc ttcagataag 700  
cccaccagta caagcagaaa tgttaagaga gcatgcagtg acctggagtt 750  
caggggaagt gcaaacagat tgccgggactg gttcaaggcc cttcatgaaa 800  
gtggaagtca aaacaagaag acaaaaacat tgctgaggcc tgagagaagc 850  
agattcgata ccagcatctt gccaatgtgc aaggactcac ttggctggat 900

gtttaacaga cttgatacaa actatgacct gctattggac cagtcagagc 950  
 tcagaagcat ttaccttgat aagaatgaac agtgtaccaa ggcattcttc 1000  
 aattcttgatg acacatacaa ggacagttaa atatctaata atgagtgggtg 1050  
 ctactgcttc cagagacagc aagaccacc ttgccagact gagctcagca 1100  
 atattcagaa gcggaaggg gtaaagaagc tcctaggaca gtatatcccc 1150  
 ctgtgtgatg aagatgggta ctacaagcca acacaatgtc atggcagtgt 1200  
 tggacagtgc tgggtgtgtg acagatatgg aaatgaagtc atgggatcca 1250  
 gaataaatgg tgttgcatg tgtgctatag attttgagat ctccggagat 1300  
 tttgctagtg gcgattttca tgaatggact gatgatgagg atgatgaaga 1350  
 cgatattatg aatgatgaag atgaaattga agatgatgat gaagatgaag 1400  
 gggatgatga tgatgggtgt gatgaccatg atgtatacat ttgattgatg 1450  
 acagttgaaa tcaataaatt ctacatttct aatatttaca aaaatgatag 1500  
 cctattttaa attatcttct tccccaataa caaatgatt ctaaacctca 1550  
 catatatatt gtataattat ttgaaaaatt gcagctaaag ttatagaact 1600  
 ttatgtttaa ataagaatca ttgtcttga gtttttatat tccttacaca 1650  
 aaaagaaaat acatatgcag tctagtcaga caaaataaag ttttgaagtg 1700  
 ctactataat aaatttttca cgagaacaaa ctttgtaaatt cttccataag 1750  
 caaatgaca gctagtgtt gggatcgtac atgttaattt tttgaaagat 1800  
 aattctaagt gaaattttaa ataaataaat ttttaatgac ctgggtctta 1850  
 aggatttagg aaaaatatgc atgctttaat tgcatttcca aagtagcatc 1900  
 ttgctagacc tagatgagtc aggataacag agagatacca catgactcca 1950  
 aaaaaaaaaa aaaa 1964

<210> 442

<211> 436

<212> PRT

<213> Homo sapiens

<400> 442

Met	Leu	Lys	Val	Ser	Ala	Val	Leu	Cys	Val	Cys	Ala	Ala	Ala	Trp
1				5				10						15

Cys	Ser	Gln	Ser	Leu	Ala	Ala	Ala	Ala	Ala	Val	Ala	Ala	Ala	Gly
				20				25						30

Gly Arg Ser Asp Gly Gly Asn Phe Leu Asp Asp Lys Gln Trp Leu

35										40					45				
Thr	Thr	Ile	Ser	Gln	Tyr	Asp	Lys	Glu	Val	Gly	Gln	Trp	Asn	Lys					
				50					55					60					
Phe	Arg	Asp	Glu	Val	Glu	Asp	Asp	Tyr	Phe	Arg	Thr	Trp	Ser	Pro					
				65					70					75					
Gly	Lys	Pro	Phe	Asp	Gln	Ala	Leu	Asp	Pro	Ala	Lys	Asp	Pro	Cys					
				80					85					90					
Leu	Lys	Met	Lys	Cys	Ser	Arg	His	Lys	Val	Cys	Ile	Ala	Gln	Asp					
				95					100					105					
Ser	Gln	Thr	Ala	Val	Cys	Ile	Ser	His	Arg	Arg	Leu	Thr	His	Arg					
				110					115					120					
Met	Lys	Glu	Ala	Gly	Val	Asp	His	Arg	Gln	Trp	Arg	Gly	Pro	Ile					
				125					130					135					
Leu	Ser	Thr	Cys	Lys	Gln	Cys	Pro	Val	Val	Tyr	Pro	Ser	Pro	Val					
				140					145					150					
Cys	Gly	Ser	Asp	Gly	His	Thr	Tyr	Ser	Phe	Gln	Cys	Lys	Leu	Glu					
				155					160					165					
Tyr	Gln	Ala	Cys	Val	Leu	Gly	Lys	Gln	Ile	Ser	Val	Lys	Cys	Glu					
				170					175					180					
Gly	His	Cys	Pro	Cys	Pro	Ser	Asp	Lys	Pro	Thr	Ser	Thr	Ser	Arg					
				185					190					195					
Asn	Val	Lys	Arg	Ala	Cys	Ser	Asp	Leu	Glu	Phe	Arg	Glu	Val	Ala					
				200					205					210					
Asn	Arg	Leu	Arg	Asp	Trp	Phe	Lys	Ala	Leu	His	Glu	Ser	Gly	Ser					
				215					220					225					
Gln	Asn	Lys	Lys	Thr	Lys	Thr	Leu	Leu	Arg	Pro	Glu	Arg	Ser	Arg					
				230					235					240					
Phe	Asp	Thr	Ser	Ile	Leu	Pro	Ile	Cys	Lys	Asp	Ser	Leu	Gly	Trp					
				245					250					255					
Met	Phe	Asn	Arg	Leu	Asp	Thr	Asn	Tyr	Asp	Leu	Leu	Leu	Asp	Gln					
				260					265					270					
Ser	Glu	Leu	Arg	Ser	Ile	Tyr	Leu	Asp	Lys	Asn	Glu	Gln	Cys	Thr					
				275					280					285					
Lys	Ala	Phe	Phe	Asn	Ser	Cys	Asp	Thr	Tyr	Lys	Asp	Ser	Leu	Ile					
				290					295					300					
Ser	Asn	Asn	Glu	Trp	Cys	Tyr	Cys	Phe	Gln	Arg	Gln	Gln	Asp	Pro					
				305					310					315					
Pro	Cys	Gln	Thr	Glu	Leu	Ser	Asn	Ile	Gln	Lys	Arg	Gln	Gly	Val					

320	325	330
Lys Lys Leu Leu Gly Gln Tyr Ile Pro	Leu Cys Asp Glu Asp Gly	
335	340	345
Tyr Tyr Lys Pro Thr Gln Cys His Gly	Ser Val Gly Gln Cys Trp	
350	355	360
Cys Val Asp Arg Tyr Gly Asn Glu Val	Met Gly Ser Arg Ile Asn	
365	370	375
Gly Val Ala Asp Cys Ala Ile Asp Phe	Glu Ile Ser Gly Asp Phe	
380	385	390
Ala Ser Gly Asp Phe His Glu Trp Thr	Asp Asp Glu Asp Asp Glu	
395	400	405
Asp Asp Ile Met Asn Asp Glu Asp Glu	Ile Glu Asp Asp Asp Glu	
410	415	420
Asp Glu Gly Asp Asp Asp Asp Gly Gly	Asp Asp His Asp Val Tyr	
425	430	435

Ile

<210> 443

<211> 25

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 443

cagcaatatt cagaagcggc aaggg 25

<210> 444

<211> 28

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 444

catcatggtc atcaccacca tcatcatc 28

<210> 445

<211> 48

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 445



ggttactaca agccaacaca atgtcatggc agtgttgga agtgctgg 48

<210> 446

<211> 3617

<212> DNA

<213> Homo sapiens

<400> 446

cagactccag atttccctgt caaccacgag gaggccagag aggaaacgcg 50  
gagcggagac aacagtacct gacgcctctt tcagcccggg atcgccccag 100  
cagggatggg cgacaagatc tggctgccct tccccgtgct ctttctggcc 150  
gctctgcctc cgggtgctgt gcctggggcg gccggcttca caccttcctc 200  
cgatagcgac ttcaccttta cccttcccgc cggccagaag gaggcttct 250  
accagcccat gccctgaag gcctcgctgg agatcgagta ccaagtttta 300  
gatggagcag gattagatat tgatttccat cttgcctctc cagaaggcaa 350  
aaccttagtt tttgaacaaa gaaaatcaga tggagttcac actgtagaga 400  
ctgaagtggg tgattacatg ttctgctttg acaatacatt cagcaccatt 450  
tctgagaagg tgattttctt tgaattaatc ctggataata tgggagaaca 500  
ggcacaagaa caagaagatt ggaagaaata tattactggc acagatatat 550  
tg gatatgaa actggaagac atcctggaat ccatcaacag catcaagtcc 600  
agactaagca aaagtgggca catacaaatt ctgcttagag catttgaagc 650  
tcgtgatcga aacatacaag aaagcaactt tgatagagtc aatttctggt 700  
ctatggttaa tttagtggtc atggtgggtg tgcagccat tcaagtttat 750  
atgctgaaga gtctgtttga agataagagg aaaagtagaa cttaaaactc 800  
caaactagag tacgtaacat tgaaaaatga ggcataaaaa tgcaataaac 850  
tgttacagtc aagaccatta atggtcttct ccaaaatatt ttgagatata 900  
aaagtaggaa acaggtataa ttttaatgtg aaaattaagt cttcactttc 950  
tgtgcaagta atcctgctga tccagttgta cttaggtgtg taacaggaat 1000  
attttgcaga atataggttt aactgaatga agccatatta ataactgcat 1050  
tttcctaact ttgaaaaatt ttgcaaatgt cttaggtgat ttaaataaat 1100  
gagtattggg cctaattgca acaccagtct gtttttaaca ggttctatta 1150  
cccagaactt ttttgtaaat gcggcagtta caaattaact gtggaagttt 1200  
tcagttttta gttataaatc acctgagaat tacctaataa tggattgaat 1250

aaatcttttag actacaaaag cccaactttt ctctattttac atatgcatct 1300  
ctcctataat gtaaatagaa taatagcttt gaaatacaat taggtttttg 1350  
agattttttat aaccaaatac atttcagtgt aacatattag cagaaagcat 1400  
tagtctttgt actttgctta cattcccaa agctgacatt ttcacgattc 1450  
ttaaaaacac aaagttacac ttactaaaat taggacatgt tttctctttg 1500  
aatgaagaa tatagtttaa aagcttcctc ctccataggg acacattttc 1550  
tctaaccctt aactaaagt taggatttta aaattaaatg tgaggtaaaa 1600  
taagtttatt tttaatagta tctgtcaagt taatatctgt caacagttaa 1650  
taatcatgtt atgttaattt taacatgatt gctgacttgg ataattcatt 1700  
attaccagca gttatgaagg aatatgtgct aaaatgatct gggcctacca 1750  
taaataaata tctccttttc tgagctctaa gaattatcag aaaacaggaa 1800  
agaatttaga aaaacttgag aaaaccta atccaaaataa attcacttaa 1850  
gtagaactat aaataaatat ctagaatctg actggctcat catgacatcc 1900  
tactcataac ataaatcaaa' ggagatgatt aatttccagt tagctggaag 1950  
aaactttggc tgtaggtttt tattttctac aagaattctg gtttgaatta 2000  
tttttgtaag caggtagatt ttataaaatg taagccctac tgtaaggttt 2050  
agcactgggt gtacatatatt attaaaaatt tttattataa caacttttat 2100  
taaaatggcc tttctgaaca ctttatttat tgatgttgaa gtaaggatta 2150  
gaaacataga ctcccaagtt ttaaacacct aaatgtgaat aacctatata 2200  
tacaacaaag tttctgccat ctagcttttt gaagtctatg ggggtcttac 2250  
tcaagtacta gtaatttaac ttcatcatga atgaactata atttttaagt 2300  
tatgccatt tataacgttg tttatgacta cattgtgagt tagaaacaaa 2350  
cttaaaattt ggggtataga acccctcaac aggttagtaa tgctggaatt 2400  
cttgatgagc aataatgata accagagagt gatttcattt aactcatag 2450  
tagtataaaa agagatacat ttccctctta ggccctggg agaagagcag 2500  
cttagatttc cctactggca aggtttttta aaatgaggta atgccgtat 2550  
atgatcaatt accttaattg gccaagaaaa tgcttcaggt gtctaggggt 2600  
atcctctgca acacttgag aacaaaggtc aataagatcc ttgcctatga 2650

ataccctcc cttttgcgct gttaaatttg caatgagaag caaatttaca 2700  
 gtaccataac taataaagca gggtaacagat ataaactact gcatcttttc 2750  
 tataaaactg tgattaagaa ttctacctct cctgtatggc tgttactgta 2800  
 ctgtactctc tgactcctta cctaacaatg aatttgttac ataatcttct 2850  
 acatgtatga tttgtgccac tgatcttaaa cctatgattc agtaacttct 2900  
 taccatataa aaacgataat tgctttatct ggaaaagaat ttaggaatac 2950  
 taaggacaat tatttttata gacaaagtaa aaagacagat atttaagagg 3000  
 cataaccaaa aaagcaaac ttgtaaacag agtaaaaatc tttaatatct 3050  
 ctaaagacat actgtttatc tgcttcatat gcttttttta atttcactat 3100  
 tccatttcta aattaaagtt atgctaaatt gagtaagctg tttatcactt 3150  
 aacagctcat tttgtctttt tcaatataca aattttaaaa atactacaat 3200  
 atttaactaa ggccaaccg atttcataa tgtagcagtt accgtgttca 3250  
 cctcacacta aggccatagag tttgctctga tatgcatttg gatgattaat 3300  
 gttatgctgt tctttcatgt gaatgtcaag acatggaggg tgtttgtaat 3350  
 tttatggtaa aattaatcct tcttacacat aatgggtgtc taaaattgac 3400  
 aaaaaatgag cacttacaat tgtatgtctc ctcaaatgaa gattctttat 3450  
 gtgaaatctt aaaagacatt gattccgcat gtaaggattt ttcacttgaa 3500  
 gtacaataat gcacaatcag tgttgtctca actgctttat acttataaac 3550  
 agccatctta aataagcaac gtattgtgag tactgatatg tatataataa 3600  
 aaattatcaa aggaaaa 3617

<210> 447

<211> 229

<212> PRT

<213> Homo sapiens

<400> 447

Met	Gly	Asp	Lys	Ile	Trp	Leu	Pro	Phe	Pro	Val	Leu	Leu	Leu	Ala
1				5					10					15
Ala	Leu	Pro	Pro	Val	Leu	Leu	Pro	Gly	Ala	Ala	Gly	Phe	Thr	Pro
				20					25					30
Ser	Leu	Asp	Ser	Asp	Phe	Thr	Phe	Thr	Leu	Pro	Ala	Gly	Gln	Lys
				35					40					45
Glu	Cys	Phe	Tyr	Gln	Pro	Met	Pro	Leu	Lys	Ala	Ser	Leu	Glu	Ile
				50					55					60

Glu Tyr Gln Val Leu Asp Gly Ala Gly Leu Asp Ile Asp Phe His	65	70	75
Leu Ala Ser Pro Glu Gly Lys Thr Leu Val Phe Glu Gln Arg Lys	80	85	90
Ser Asp Gly Val His Thr Val Glu Thr Glu Val Gly Asp Tyr Met	95	100	105
Phe Cys Phe Asp Asn Thr Phe Ser Thr Ile Ser Glu Lys Val Ile	110	115	120
Phe Phe Glu Leu Ile Leu Asp Asn Met Gly Glu Gln Ala Gln Glu	125	130	135
Gln Glu Asp Trp Lys Lys Tyr Ile Thr Gly Thr Asp Ile Leu Asp	140	145	150
Met Lys Leu Glu Asp Ile Leu Glu Ser Ile Asn Ser Ile Lys Ser	155	160	165
Arg Leu Ser Lys Ser Gly His Ile Gln Ile Leu Leu Arg Ala Phe	170	175	180
Glu Ala Arg Asp Arg Asn Ile Gln Glu Ser Asn Phe Asp Arg Val	185	190	195
Asn Phe Trp Ser Met Val Asn Leu Val Val Met Val Val Val Ser	200	205	210
Ala Ile Gln Val Tyr Met Leu Lys Ser Leu Phe Glu Asp Lys Arg	215	220	225

Lys Ser Arg Thr

<210> 448

<211> 23

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 448

cccagcaggg ctgggcgaca aga 23

<210> 449

<211> 23

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 449

gtcttccagt ttcatatcca ata 23

<210> 450

<211> 43

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 450

ccagaaggag cacggggaag ggcagccaga tcttgctgcc cat 43

<210> 451

<211> 859

<212> DNA

<213> Homo sapiens

<400> 451

ccatccctga gatcttttta taaaaaaccc agtctttgct gaccagacaa 50  
agcataccag atctcaccag agagtcgcag acactatgct gcctcccatg 100  
gccctgcca gtgtgtcctg gatgctgctt tcttgcctca ttctcctgtg 150  
tcaggttcaa ggtgaagaaa ccagaagga actgccctct ccacggatca 200  
gctgtcccaa aggtccaag gcctatggct cccctgcta tgccttgttt 250  
ttgtcaccaa aatcctggat ggatgcagat ctggcttgcc agaagcggcc 300  
ctctggaaaa ctggtgtctg tgctcagtgg ggctgagga tccttcgtgt 350  
cctccctggt gaggagcatt agtaacagct actcatacat ctggattggg 400  
ctccatgacc ccacacaggg ctctgagcct gatggagatg gatgggagtg 450  
gagtagcact gatgtgatga attactttgc atgggagaaa aatccctcca 500  
ccatcttaaa ccctggccac tgtgggagcc tgtcaagaag cacaggattt 550  
ctgaagtgga aagattataa ctgtgatgca aagttaccct atgtctgcaa 600  
gttcaaggac tagggcaggt ggggaagtcag cagcctcagc ttggcgtgca 650  
gctcatcatg gacatgagac cagtgtgaag actcaccctg gaagagaata 700  
ttctcccaa actgccctac ctgactacct tgtcatgac ctcttcttt 750  
ttctttttt ttaccttca ttccaggctt ttctctgtct tccatgtctt 800  
gagatctcag agaataataa taaaatgtt actttataaa aaaaaaaaaa 850  
aaaaaaaaa 859

<210> 452

<211> 175

<212> PRT

<213> Homo sapiens

<400> 452

Met	Leu	Pro	Pro	Met	Ala	Leu	Pro	Ser	Val	Ser	Trp	Met	Leu	Leu
1				5					10					15
Ser	Cys	Leu	Ile	Leu	Leu	Cys	Gln	Val	Gln	Gly	Glu	Glu	Thr	Gln
				20					25					30
Lys	Glu	Leu	Pro	Ser	Pro	Arg	Ile	Ser	Cys	Pro	Lys	Gly	Ser	Lys
				35					40					45
Ala	Tyr	Gly	Ser	Pro	Cys	Tyr	Ala	Leu	Phe	Leu	Ser	Pro	Lys	Ser
				50					55					60
Trp	Met	Asp	Ala	Asp	Leu	Ala	Cys	Gln	Lys	Arg	Pro	Ser	Gly	Lys
				65					70					75
Leu	Val	Ser	Val	Leu	Ser	Gly	Ala	Glu	Gly	Ser	Phe	Val	Ser	Ser
				80					85					90
Leu	Val	Arg	Ser	Ile	Ser	Asn	Ser	Tyr	Ser	Tyr	Ile	Trp	Ile	Gly
				95					100					105
Leu	His	Asp	Pro	Thr	Gln	Gly	Ser	Glu	Pro	Asp	Gly	Asp	Gly	Trp
				110					115					120
Glu	Trp	Ser	Ser	Thr	Asp	Val	Met	Asn	Tyr	Phe	Ala	Trp	Glu	Lys
				125					130					135
Asn	Pro	Ser	Thr	Ile	Leu	Asn	Pro	Gly	His	Cys	Gly	Ser	Leu	Ser
				140					145					150
Arg	Ser	Thr	Gly	Phe	Leu	Lys	Trp	Lys	Asp	Tyr	Asn	Cys	Asp	Ala
				155					160					165
Lys	Leu	Pro	Tyr	Val	Cys	Lys	Phe	Lys	Asp					
				170					175					

<210> 453

<211> 550

<212> DNA

<213> Homo sapiens

<400> 453

ccagtctgtc gccacctcac ttggtgtctg ctgtccccgc caggcaagcc 50

tggggtgaga gcacagagga gtgggccggg accatgcggg ggacgcggct 100

ggcgctcctg gcgctggtgc tggctgcctg cggagagctg gcgccggccc 150

tcgctgcta cgtctgtccg gagccacag gagtgtcgga ctgtgtcacc 200

atcgccacct gcaccaccaa cgaaaccatg tgcaagacca cactctactc 250

ccgggagata gtgtaccct tccaggggga ctccacggtg accaagtcct 300

gtgccagcaa gtgtaagccc tcggatgtgg atggcatcgg ccagaccctg 350  
 cccgtgtcct gctgcaatac tgagctgtgc aatgtagacg gggcgcccg 400  
 tctgaacagc ctccactgcg gggccctcac gctcctccca ctcttgagcc 450  
 tccgactgta gagtccccgc ccacccccat ggccctatgc ggcccagccc 500  
 cgaatgcctt gaagaagtgc cccctgcacc aggaaaaaaa aaaaaaaaaa 550

<210> 454

<211> 125

<212> PRT

<213> Homo sapiens

<400> 454

Met	Arg	Gly	Thr	Arg	Leu	Ala	Leu	Leu	Ala	Leu	Val	Leu	Ala	Ala
1				5					10					15
Cys	Gly	Glu	Leu	Ala	Pro	Ala	Leu	Arg	Cys	Tyr	Val	Cys	Pro	Glu
			20						25					30
Pro	Thr	Gly	Val	Ser	Asp	Cys	Val	Thr	Ile	Ala	Thr	Cys	Thr	Thr
				35					40					45
Asn	Glu	Thr	Met	Cys	Lys	Thr	Thr	Leu	Tyr	Ser	Arg	Glu	Ile	Val
				50					55					60
Tyr	Pro	Phe	Gln	Gly	Asp	Ser	Thr	Val	Thr	Lys	Ser	Cys	Ala	Ser
				65					70					75
Lys	Cys	Lys	Pro	Ser	Asp	Val	Asp	Gly	Ile	Gly	Gln	Thr	Leu	Pro
				80					85					90
Val	Ser	Cys	Cys	Asn	Thr	Glu	Leu	Cys	Asn	Val	Asp	Gly	Ala	Pro
				95					100					105
Ala	Leu	Asn	Ser	Leu	His	Cys	Gly	Ala	Leu	Thr	Leu	Leu	Pro	Leu
				110					115					120
Leu	Ser	Leu	Arg	Leu										
				125										

<210> 455

<211> 1518

<212> DNA

<213> Homo sapiens

<400> 455

ctgcagtcag gactctggga ccgcaggggg ctcccggacc ctgactctgc 50  
 agccgaaccg gcacggtttc gtggggaccc aggcttgcaa agtgacggtc 100  
 attttctctt tctttctccc tcttgagtc tcttgagatg atggctctgg 150  
 gcgcagcggg agctaccggg gtctttgtcg cgatggtagc ggcggtcttc 200

ggcgccacc ctctgctggg agtgagcgcc accttgaact cggttctcaa 250  
 ttccaacgct atcaagaacc tgccccacc gctgggcggc gctgcggggc 300  
 acccaggctc tgcagtcagc gccgcgccgg gaatcctgta cccgggcggg 350  
 aataagtacc agaccattga caactaccag ccgtaccgct gcgcagagga 400  
 cgaggagtgc ggcactgatg agtactgccc tagtcccacc cgcggagggg 450  
 acgcaggcgt gcaaatctgt ctgcctgca ggaagcgccg aaaacgctgc 500  
 atgcgtcacg ctatgtgctg ccccggaat tactgcaaaa atggaatatg 550  
 tgtgtcttct gatcaaaaatc atttccgagg agaaattgag gaaaccatca 600  
 ctgaaagctt tggtaatgat catagcacct tggatgggta ttccagaaga 650  
 accaccttgt cttcaaaaat gtatcacacc aaaggacaag aaggttctgt 700  
 ttgtctccgg tcatcagact gtgcctcagg attgtgttgt gctagacact 750  
 tctggtccaa gatctgtaaa cctgtcctga aagaaggta agtgtgtacc 800  
 aagcatagga gaaaaggctc tcatggacta gaaatattcc agcgttgta 850  
 ctgtggagaa ggtctgtctt gccggataca gaaagatcac catcaagcca 900  
 gtaattcttc taggcttcac acttgtcaga gacactaaac cagctatcca 950  
 aatgcagtga actcctttta tataatagat gctatgaaaa ccttttatga 1000  
 ccttcatcaa ctcaatccta aggatataca agttctgtgg tttcagttaa 1050  
 gcattccaat aacaccttcc aaaaacctgg agtgtaagag ctttgtttct 1100  
 ttatggaact cccctgtgat tgcagtaaata tactgtattg taaattctca 1150  
 gtgtggcact tacctgtaaa tgcaatgaaa cttttaatta tttttctaaa 1200  
 ggtgctgcac tgcctatttt tcctcttgtt atgtaaattt ttgtacacat 1250  
 tgattgttat cttgactgac aaatattcta tattgaactg aagtaaatca 1300  
 tttcagctta tagttcttaa aagcataacc ctttacccca ttttaattcta 1350  
 gagtctagaa cgcaaggatc tcttggaatg acaaatgata ggtacctaaa 1400  
 atgtaacatg aaaatactag cttattttct gaaatgtact atcttaatgc 1450  
 ttaaattata ttcccttta ggctgtgata gtttttgaaa taaaatttaa 1500  
 catttaaaaa aaaaaaaaa 1518

<210> 456

<211> 266



<212> PRT

<213> Homo sapiens

<400> 456

Met	Met	Ala	Leu	Gly	Ala	Ala	Gly	Ala	Thr	Arg	Val	Phe	Val	Ala
1				5					10					15

Met	Val	Ala	Ala	Ala	Leu	Gly	Gly	His	Pro	Leu	Leu	Gly	Val	Ser
				20					25					30

Ala	Thr	Leu	Asn	Ser	Val	Leu	Asn	Ser	Asn	Ala	Ile	Lys	Asn	Leu
				35					40					45

Pro	Pro	Pro	Leu	Gly	Gly	Ala	Ala	Gly	His	Pro	Gly	Ser	Ala	Val
				50					55					60

Ser	Ala	Ala	Pro	Gly	Ile	Leu	Tyr	Pro	Gly	Gly	Asn	Lys	Tyr	Gln
				65					70					75

Thr	Ile	Asp	Asn	Tyr	Gln	Pro	Tyr	Pro	Cys	Ala	Glu	Asp	Glu	Glu
				80					85					90

Cys	Gly	Thr	Asp	Glu	Tyr	Cys	Ala	Ser	Pro	Thr	Arg	Gly	Gly	Asp
				95					100					105

Ala	Gly	Val	Gln	Ile	Cys	Leu	Ala	Cys	Arg	Lys	Arg	Arg	Lys	Arg
				110					115					120

Cys	Met	Arg	His	Ala	Met	Cys	Cys	Pro	Gly	Asn	Tyr	Cys	Lys	Asn
				125					130					135

Gly	Ile	Cys	Val	Ser	Ser	Asp	Gln	Asn	His	Phe	Arg	Gly	Glu	Ile
				140					145					150

Glu	Glu	Thr	Ile	Thr	Glu	Ser	Phe	Gly	Asn	Asp	His	Ser	Thr	Leu
				155					160					165

Asp	Gly	Tyr	Ser	Arg	Arg	Thr	Thr	Leu	Ser	Ser	Lys	Met	Tyr	His
				170					175					180

Thr	Lys	Gly	Gln	Glu	Gly	Ser	Val	Cys	Leu	Arg	Ser	Ser	Asp	Cys
				185					190					195

Ala	Ser	Gly	Leu	Cys	Cys	Ala	Arg	His	Phe	Trp	Ser	Lys	Ile	Cys
				200					205					210

Lys	Pro	Val	Leu	Lys	Glu	Gly	Gln	Val	Cys	Thr	Lys	His	Arg	Arg
				215					220					225

Lys	Gly	Ser	His	Gly	Leu	Glu	Ile	Phe	Gln	Arg	Cys	Tyr	Cys	Gly
				230					235					240

Glu	Gly	Leu	Ser	Cys	Arg	Ile	Gln	Lys	Asp	His	His	Gln	Ala	Ser
				245					250					255

Asn	Ser	Ser	Arg	Leu	His	Thr	Cys	Gln	Arg	His
				260					265	

<210> 457  
<211> 638  
<212> DNA  
<213> Homo sapiens

<220>  
<221> unsure  
<222> 30, 123, 133, 139, 180, 214, 259, 282, 308, 452, 467, 471, 473,  
509, 556  
<223> unknown base

<400> 457  
tgtgtttccc tgcagtcaga atttgggacn gcaggggttc ccggacctga 50  
ttttgcagcg gaacgggaag gttttgtggg acccaggttg aaatgacggt 100  
catttttttt tctttctcct tcnggagtcc ttntgagang atggtttttg 150  
gcgcagcggg agctaaccgc gttttttgtn gcgatggtag cggcggtttt 200  
cggcggccac cttntgctgg gagtgagcgc caccttgaat cggttttcaa 250  
ttccaacgnt atcaagaacc tgccccacc gntgggcggc gctgcggggc 300  
accaggnnt tgcagtcagc gccgcgccg gaatcctgta cccgggcggg 350  
aataagtacc agaccattga caattaccag ccgtaccgt gcgcagagga 400  
cgaggagtgc ggcaactgat agtactgcgc tagtcccacc cgcggagggg 450  
angcgggcgt gcaaatntgt ntngcctgca ggaagcgccg aaaacgctgc 500  
atgcgtcang ctatgtgctg ccccggaat tactgcaaaa atggaatatg 550  
tgtgtnttct gatcaaaatc atttccgagg agaaattgag gaaaccatca 600  
ctgaaagctt tggtaatgat catagcacct tggatggg 638

<210> 458  
<211> 4040  
<212> DNA  
<213> Homo sapiens

<400> 458  
gaggaacctt ccggtaccgg ccgcgcgctg gtagtcgccg gtgtggctgc 50  
acctcaccaa tcccgtgcgc cgcggctggg ccgtcggaga gtgcgtgtgc 100  
ttctctctctg cagcgggtgc ttgggctcgg ccaggcgggg tccgcgcga 150  
gggtttgagg atgggggagt agctacagga agcgaccccg cgatggcaag 200  
gtatatTTTT gtggaatgaa aaggaagtat tagaaatgag ctgaagacca 250  
ttcacagatt aatatttttg gggacagatt tgtgatgctt gattcacct 300

tgaagtaatg tagacagaag ttctcaaatt tgcattattac atcaactgga 350  
accagcagtg aatcttaattg ttcacttaaa tcagaacttg cataagaaag 400  
agaatgggag tctgggttaaa taaagatgac tatatcagag acttgaaaag 450  
gatcattctc tggtttctga tagtgatat ggccatttta gtgggcacag 500  
atcaggattt ttacagttta cttggagtgt ccaaaactgc aagcagtaga 550  
gaaataagac aagctttcaa gaaattggca ttgaagttac atcctgataa 600  
aaacccgaat aacccaaatg cacatggcga ttttttaaaa ataaatagag 650  
catatgaagt actcaaagat gaagatctac ggaaaaagta tgacaaatat 700  
ggagaaaagg gacttgagga taatcaagggt ggccagtatg aaagctggaa 750  
ctattatcgt tatgattttg gtatttatga tgatgacct gaaatcataa 800  
cattggaaag aagagaattt gatgctgctg ttaattctgg agaactgtgg 850  
tttgtaaatt tttactcccc aggctgttca cactgccatg atttagctcc 900  
cacatggaga gactttgcta aagaagtga tgggttactt cgaattggag 950  
ctgttaactg tggatgatgat agaagcttt gccgaatgaa aggagtcaac 1000  
agctatccca gtctcttcat ttttcggtct ggaatggccc cagtgaata 1050  
tcatggagac agatcaaagg agagtttagt gagttttgca atgcagcatg 1100  
ttagaagtac agtgacagaa ctttgacag gaaattttgt caactccata 1150  
caaactgctt ttgctgctgg tattggctgg ctgatcactt tttgttcaaa 1200  
aggaggagat tgtttgactt cacagacacg actcaggctt agtggcatgt 1250  
tgttttctca ctcatggat gctaaagaaa tatatttgga agtaatacat 1300  
aatcttccag attttgaact actttcggca aacacactag aggatcgttt 1350  
ggctcatcat cgggtggctgt tattttttca ttttgaaaaa aatgaaaatt 1400  
caaatgatcc tgagctgaaa aaactaaaaa ctctacttaa aaatgatcat 1450  
attcaagttg gcaggtttga ctgttcctct gcaccagaca tctgtagtaa 1500  
tctgtatgtt tttcagccgt ctctagcagt atttaaagga caaggaacca 1550  
aagaatatga aattcatcat ggaaagaaga ttctatatga tatacttgcc 1600  
tttgccaaag aaagtgtgaa ttctcatgtt accacgcttg gacctcaaaa 1650  
ttttctgcc aatgacaaaag aaccatggct tggtgatttc tttgccccct 1700  
ggtgtccacc atgtcgagct ttactaccag agttacgaag agcatcaa 1750

cttctttatg gtcagcttaa gtttgggtaca ctagattgta cagttcatga 1800  
gggactctgt aacatgtata acattcaggc ttatccaaca acagtgggtat 1850  
tcaaccagtc caacattcat gagtatgaag gacatcactc tgctgaacaa 1900  
atcttggagt tcatagagga tcttatgaat ccttcagtgg tctcccttac 1950  
accaccacc ttcaacgaac tagttacaca aagaaaacac aacgaagtct 2000  
ggatggttga tttctattct ccgtgggtgc atccttgcca agtcttaatg 2050  
ccagaatgga aaagaatggc cgggacatta actggactga tcaacgtggg 2100  
cagtatagat tgccaacagt atcattcttt ttgtgccag gaaaacgttc 2150  
aaagataccc tgagataaga ttttttcccc caaaatcaaa taaagcttat 2200  
cagtatcaca gttacaatgg ttggaatagg gatgcttatt ccctgagaat 2250  
ctgggggtcta ggatttttac ctcaagtatc cacagatcta acacctcaga 2300  
ctttcagtga aaaagttcta caagggaaaa atcattgggt gattgatttc 2350  
tatgctcctt ggtgtggacc ttgccagaat ttgtctccag aatttgagct 2400  
cttggctagg atgattaaag gaaaagtgaag agctggaaaa gtagactgtc 2450  
aggcttatgc tcagacatgc cagaaagctg ggatcagggc ctatccaact 2500  
gttaagtttt atttctacga aagagcaaag agaaattttc aagaagagca 2550  
gataaatacc agagatgcaa aagcaatcgc tgccttaata agtgaaaaat 2600  
tggaactct ccgaaatcaa ggcaagagga ataaggatga actttgataa 2650  
tgttgaagat gaagaaaaag tttaaaagaa attctgacag atgacatcag 2700  
aagacaccta tttagaatgt tacatttatg atgggaatga atgaacatta 2750  
tcttagactt gcagttgtac tgccagaatt atctacagca ctggtgtaaa 2800  
agaaggggtct gcaaaacttt tctgtaaagg gccggtttat aaatatttta 2850  
gactttgcag gctataatat atggttcaca catgagaaca agaataagagt 2900  
catcatgtat tttttgttat ttgcttttaa caaccttaa aaaatattaa 2950  
aacgattctt agctcagagc catacaaaag taggctggat tcagtccatg 3000  
gaccatagat tgctgtcccc ctgcacggac ttataatgtt tcaggtggct 3050  
ggcttgaaca tgagtctgct gtgctatcta cataaatgtc taagttgtat 3100  
aaagtccact ttcccttcac gtttttggc tgacctgaaa agaggtaact 3150

tagtttttgg tcacttggtc tcctaaaaat gctatcccta accatatatt 3200  
tatatttcgt tttaaaaaca cccatgatgt ggcacagtaa acaaaccctg 3250  
ttatgctgta ttattatgag gagattcttc attgttttct ttcctttctca 3300  
aaggttgaaa aaatgctttt aatttttcac agccgagaaa cagtgcagca 3350  
gtatatgtgc acacagtaag tacacaaatt tgagcaacag taagtgcaca 3400  
aattctgtag ttgctgtat catccaggaa aacctgaggg aaaaaaatta 3450  
tagcaattaa ctgggcattg tagagtatcc taaatatgtt atcaagtatt 3500  
tagagttcta tattttaaag atatatgtgt tcatgtattt tctgaaattg 3550  
ctttcataga aattttccca ctgatagttg atttttgagg catctaatat 3600  
ttacatatatt gccttctgaa ctttgttttg acctgtatcc tttatttaca 3650  
ttgggttttt ctttcatagt ttgggttttt cactcctgtc cagtctattt 3700  
attattcaaa taggaaaaat tactttacag gttgttttac thtagcttat 3750  
aatgatactg tagttattcc agttactagt ttactgtcag agggctgcct 3800  
ttttcagata aatattgaca taataactga agttattttt ataagaaaat 3850  
caagtatata aatctaggaa agggatcttc tagtttctgt gttgtttaga 3900  
ctcaaagaat cacaaatttg tcagtaacat gtagttgttt agttataatt 3950  
cagagtgtac agaatggtaa aaattccaat cagtcaaaag aggtcaatga 4000  
attaaaaggc ttgcaacttt ttcaaaaaaa aaaaaaaaaa 4040

<210> 459

<211> 747

<212> PRT

<213> Homo sapiens

<400> 459

Met	Gly	Val	Trp	Leu	Asn	Lys	Asp	Asp	Tyr	Ile	Arg	Asp	Leu	Lys
1				5					10				15	

Arg	Ile	Ile	Leu	Cys	Phe	Leu	Ile	Val	Tyr	Met	Ala	Ile	Leu	Val
			20						25				30	

Gly	Thr	Asp	Gln	Asp	Phe	Tyr	Ser	Leu	Leu	Gly	Val	Ser	Lys	Thr
			35						40				45	

Ala	Ser	Ser	Arg	Glu	Ile	Arg	Gln	Ala	Phe	Lys	Lys	Leu	Ala	Leu
			50						55				60	

Lys	Leu	His	Pro	Asp	Lys	Asn	Pro	Asn	Asn	Pro	Asn	Ala	His	Gly
			65						70				75	

Asp Phe Leu Lys Ile Asn Arg Ala Tyr Glu Val Leu Lys Asp Glu	80	85	90
Asp Leu Arg Lys Lys Tyr Asp Lys Tyr Gly Glu Lys Gly Leu Glu	95	100	105
Asp Asn Gln Gly Gly Gln Tyr Glu Ser Trp Asn Tyr Tyr Arg Tyr	110	115	120
Asp Phe Gly Ile Tyr Asp Asp Asp Pro Glu Ile Ile Thr Leu Glu	125	130	135
Arg Arg Glu Phe Asp Ala Ala Val Asn Ser Gly Glu Leu Trp Phe	140	145	150
Val Asn Phe Tyr Ser Pro Gly Cys Ser His Cys His Asp Leu Ala	155	160	165
Pro Thr Trp Arg Asp Phe Ala Lys Glu Val Asp Gly Leu Leu Arg	170	175	180
Ile Gly Ala Val Asn Cys Gly Asp Asp Arg Met Leu Cys Arg Met	185	190	195
Lys Gly Val Asn Ser Tyr Pro Ser Leu Phe Ile Phe Arg Ser Gly	200	205	210
Met Ala Pro Val Lys Tyr His Gly Asp Arg Ser Lys Glu Ser Leu	215	220	225
Val Ser Phe Ala Met Gln His Val Arg Ser Thr Val Thr Glu Leu	230	235	240
Trp Thr Gly Asn Phe Val Asn Ser Ile Gln Thr Ala Phe Ala Ala	245	250	255
Gly Ile Gly Trp Leu Ile Thr Phe Cys Ser Lys Gly Gly Asp Cys	260	265	270
Leu Thr Ser Gln Thr Arg Leu Arg Leu Ser Gly Met Leu Phe Leu	275	280	285
Asn Ser Leu Asp Ala Lys Glu Ile Tyr Leu Glu Val Ile His Asn	290	295	300
Leu Pro Asp Phe Glu Leu Leu Ser Ala Asn Thr Leu Glu Asp Arg	305	310	315
Leu Ala His His Arg Trp Leu Leu Phe Phe His Phe Gly Lys Asn	320	325	330
Glu Asn Ser Asn Asp Pro Glu Leu Lys Lys Leu Lys Thr Leu Leu	335	340	345
Lys Asn Asp His Ile Gln Val Gly Arg Phe Asp Cys Ser Ser Ala	350	355	360

Pro Asp Ile Cys	Ser Asn Leu Tyr Val	Phe Gln Pro Ser Leu	Ala
365		370	375
Val Phe Lys Gly	Gln Gly Thr Lys Glu	Tyr Glu Ile His His	Gly
380		385	390
Lys Lys Ile Leu	Tyr Asp Ile Leu Ala	Phe Ala Lys Glu Ser	Val
395		400	405
Asn Ser His Val	Thr Thr Leu Gly Pro	Gln Asn Phe Pro Ala	Asn
410		415	420
Asp Lys Glu Pro	Trp Leu Val Asp Phe	Phe Ala Pro Trp Cys	Pro
425		430	435
Pro Cys Arg Ala	Leu Leu Pro Glu Leu	Arg Arg Ala Ser Asn	Leu
440		445	450
Leu Tyr Gly Gln	Leu Lys Phe Gly Thr	Leu Asp Cys Thr Val	His
455		460	465
Glu Gly Leu Cys	Asn Met Tyr Asn Ile	Gln Ala Tyr Pro Thr	Thr
470		475	480
Val Val Phe Asn	Gln Ser Asn Ile His	Glu Tyr Glu Gly His	His
485		490	495
Ser Ala Glu Gln	Ile Leu Glu Phe Ile	Glu Asp Leu Met Asn	Pro
500		505	510
Ser Val Val Ser	Leu Thr Pro Thr Thr	Phe Asn Glu Leu Val	Thr
515		520	525
Gln Arg Lys His	Asn Glu Val Trp Met	Val Asp Phe Tyr Ser	Pro
530		535	540
Trp Cys His Pro	Cys Gln Val Leu Met	Pro Glu Trp Lys Arg	Met
545		550	555
Ala Arg Thr Leu	Thr Gly Leu Ile Asn	Val Gly Ser Ile Asp	Cys
560		565	570
Gln Gln Tyr His	Ser Phe Cys Ala Gln	Glu Asn Val Gln Arg	Tyr
575		580	585
Pro Glu Ile Arg	Phe Phe Pro Pro Lys	Ser Asn Lys Ala Tyr	Gln
590		595	600
Tyr His Ser Tyr	Asn Gly Trp Asn Arg	Asp Ala Tyr Ser Leu	Arg
605		610	615
Ile Trp Gly Leu	Gly Phe Leu Pro Gln	Val Ser Thr Asp Leu	Thr
620		625	630
Pro Gln Thr Phe	Ser Glu Lys Val Leu	Gln Gly Lys Asn His	Trp
635		640	645

Val	Ile	Asp	Phe	Tyr	Ala	Pro	Trp	Cys	Gly	Pro	Cys	Gln	Asn	Phe	650	655	660
Ala	Pro	Glu	Phe	Glu	Leu	Leu	Ala	Arg	Met	Ile	Lys	Gly	Lys	Val	665	670	675
Lys	Ala	Gly	Lys	Val	Asp	Cys	Gln	Ala	Tyr	Ala	Gln	Thr	Cys	Gln	680	685	690
Lys	Ala	Gly	Ile	Arg	Ala	Tyr	Pro	Thr	Val	Lys	Phe	Tyr	Phe	Tyr	695	700	705
Glu	Arg	Ala	Lys	Arg	Asn	Phe	Gln	Glu	Glu	Gln	Ile	Asn	Thr	Arg	710	715	720
Asp	Ala	Lys	Ala	Ile	Ala	Ala	Leu	Ile	Ser	Glu	Lys	Leu	Glu	Thr	725	730	735
Leu	Arg	Asn	Gln	Gly	Lys	Arg	Asn	Lys	Asp	Glu	Leu				740	745	

<210> 460

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 460

actccccagg ctgttcacac tgcc 24

<210> 461

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 461

gatcagccag ccaataccag cagc 24

<210> 462

<211> 50

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 462

gtggtgatga tagaatgctt tgccgaatga aaggagtcaa cagctatccc 50

<210> 463

<211> 1818

<212> DNA



<213> Homo sapiens

<400> 463

agacagtacc tcctccctag gactacacaa ggactgaacc agaaggaaga 50  
ggacagagca aagccatgaa catcatccta gaaatccttc tgcttctgat 100  
caccatcatc tactcctact tggagtcgtt ggtgaagttt ttcattcctc 150  
agaggagaaa atctgtggct ggggagattg ttctcattac tggagctggg 200  
catggaatag gcaggcagac tacttatgaa ttgcaaaac gacagagcat 250  
attggttctg tgggatatta ataagcgcg tgtggaggaa actgcagctg 300  
agtgccgaaa actaggcgtc actgcgcatg cgtatgtggt agactgcagc 350  
aacagagaag agatctatcg ctctctaaat caggtgaaga aagaagtggg 400  
tgatgtaaca atcgtggtga ataatgctgg gacagtatat ccagccgatc 450  
ttctcagcac caaggatgaa gagattacca agacatttga ggtcaacatc 500  
ctaggacatt ttggatcac aaaagcactt cttccatcga tgatggagag 550  
aaatcatggc cacatcgtca cagtggcttc agtgtgcggc cacgaaggga 600  
ttccttacct catcccatat tgttccagca aatttgccgc tgttggcttt 650  
cacagaggtc tgacatcaga acttcaggcc ttgggaaaaa ctggtatcaa 700  
aacctcatgt ctctgccag tttttgtgaa tactgggttc accaaaaatc 750  
caagcacaag attatggcct gtattggaga cagatgaagt cgtaagaagt 800  
ctgatagatg gaatacttac caataagaaa atgatttttg ttccatcgta 850  
tatcaatatc tttctgagac tacagaagtt tcttctgaa cgcgccctcag 900  
cgattttaaa tcgtatgcag aatattcaat ttgaagcagt ggttggccac 950  
aaaatcaaaa tgaaatgaat aaataagctc cagccagaga tgtatgcatg 1000  
ataatgatat gaatagtttc gaatcaatgc tgcaaagctt tatttcacat 1050  
tttttcagtc ctgataatat taaaaacatt ggtttggcac tagcagcagt 1100  
caaacgaaca agattaatta cctgtcttcc tgtttctcaa gaatatttac 1150  
gtagtttttc ataggtctgt ttttcctttc atgcctctta aaaacttctg 1200  
tgcttacata aacatactta aaaggttttc ttttaagatat tttatttttc 1250  
catttaaagg tggacaaaag ctacctccct aaaagtaaata acaaagagaa 1300  
cttattttaca cagggaaggt ttaagactgt tcaagtagca ttccaatctg 1350

tagccatgcc acagaatata aacaagaaca cagaatgagt gcacagctaa 1400  
 gagatcaagt ttcagcaggc agctttatct caacctggac atattttaag 1450  
 attcagcatt tgaaagattt ccctagcctc ttcctttttc attagcccaa 1500  
 aacggtgcaa ctctattctg gactttatta cttgattctg tcttctgtat 1550  
 aactctgaag tccacaaaaa gtggaccctc tatatttcct ccctttttat 1600  
 agtcttataa gatacattat gaaaggtgac cgactctatt ttaaactctca 1650  
 gaattttaag ttctagcccc atgataacct ttttctttgt aatttatgct 1700  
 ttcatataat cttgggtccca gagatgttta gacaatttta ggctcaaaaa 1750  
 ttaaagctaa cacaggaaaa ggaactgtac tggctattac ataagaaaca 1800  
 atggacccaa gagaagaa 1818

<210> 464

<211> 300

<212> PRT

<213> Homo sapiens

<400> 464

Met	Asn	Ile	Ile	Leu	Glu	Ile	Leu	Leu	Leu	Ile	Thr	Ile	Ile	1	5	10	15
Tyr	Ser	Tyr	Leu	Glu	Ser	Leu	Val	Lys	Phe	Phe	Ile	Pro	Gln	Arg	20	25	30
Arg	Lys	Ser	Val	Ala	Gly	Glu	Ile	Val	Leu	Ile	Thr	Gly	Ala	Gly	35	40	45
His	Gly	Ile	Gly	Arg	Gln	Thr	Thr	Tyr	Glu	Phe	Ala	Lys	Arg	Gln	50	55	60
Ser	Ile	Leu	Val	Leu	Trp	Asp	Ile	Asn	Lys	Arg	Gly	Val	Glu	Glu	65	70	75
Thr	Ala	Ala	Glu	Cys	Arg	Lys	Leu	Gly	Val	Thr	Ala	His	Ala	Tyr	80	85	90
Val	Val	Asp	Cys	Ser	Asn	Arg	Glu	Glu	Ile	Tyr	Arg	Ser	Leu	Asn	95	100	105
Gln	Val	Lys	Lys	Glu	Val	Gly	Asp	Val	Thr	Ile	Val	Val	Asn	Asn	110	115	120
Ala	Gly	Thr	Val	Tyr	Pro	Ala	Asp	Leu	Leu	Ser	Thr	Lys	Asp	Glu	125	130	135
Glu	Ile	Thr	Lys	Thr	Phe	Glu	Val	Asn	Ile	Leu	Gly	His	Phe	Trp	140	145	150
Ile	Thr	Lys	Ala	Leu	Leu	Pro	Ser	Met	Met	Glu	Arg	Asn	His	Gly			

155	160	165
His Ile Val Thr Val Ala Ser Val Cys Gly	His Glu Gly Ile Pro	
170	175	180
Tyr Leu Ile Pro Tyr Cys Ser Ser Lys Phe	Ala Ala Val Gly Phe	
185	190	195
His Arg Gly Leu Thr Ser Glu Leu Gln Ala	Leu Gly Lys Thr Gly	
200	205	210
Ile Lys Thr Ser Cys Leu Cys Pro Val Phe	Val Asn Thr Gly Phe	
215	220	225
Thr Lys Asn Pro Ser Thr Arg Leu Trp Pro	Val Leu Glu Thr Asp	
230	235	240
Glu Val Val Arg Ser Leu Ile Asp Gly Ile	Leu Thr Asn Lys Lys	
245	250	255
Met Ile Phe Val Pro Ser Tyr Ile Asn Ile	Phe Leu Arg Leu Gln	
260	265	270
Lys Phe Leu Pro Glu Arg Ala Ser Ala Ile	Leu Asn Arg Met Gln	
275	280	285
Asn Ile Gln Phe Glu Ala Val Val Gly His	Lys Ile Lys Met Lys	
290	295	300

<210> 465

<211> 1547

<212> DNA

<213> Homo sapiens

<400> 465

```

cggcggcggc tgcgggcgcg aggtgagggg cgcgaggtga ggggcgcgag 50
gttcccagca ggatgccccg gctctgcagg aagctgaagt gagaggcccc 100
gagagggccc agcccggccc gggcaggatg accaaggccc ggctgttccg 150
gctgtggctg gtgctggggt cgggtgttcat gatcctgctg atcatcgtgt 200
actgggacag cgcaggcgcc gcgcacttct acttgcacac gtccttctct 250
aggccgcaca cggggcgccc gctgcccacg cccgggcccg acagggacag 300
ggagctcacg gccgactccg atgtcgacga gtttctggac aagtttctca 350
gtgctggcgt gaagcagagc gaccttccca gaaaggagac ggagcagccg 400
cctgcgccgg ggagcatgga ggagagcgtg agaggctacg actgggtccc 450
gcgcgacgcc cggcgacgcc cagaccaggg ccggcagcag gcggagcggg 500
ggagcgtgct gcggggcttc tgcgccaact ccagcctggc cttccccacc 550

```

aaggagcgcg cattcgacga catccccaac tcggagctga gccacctgat 600  
cgtggacgac cggcacgggg ccatctactg ctacgtgcc aaggtggcct 650  
gcaccaactg gaagcgcggtg atgatactgc tgagcggaag cctgctgcac 700  
cgcggtgctg cctaccgga cccgctgcgc atcccgcgcg agcacgtgca 750  
caacgccagc gcgcacctga ccttcaacaa gttctggcgc cgctacggga 800  
agctctcccg ccacctcatg aaggtcaagc tcaagaagta caccaagttc 850  
ctcttcgtgc gcgacccctt cgtgcgcctg atctccgct tccgcagcaa 900  
gttcgagctg gagaacgagg agttctaccg caagttcgcc gtgcccacgc 950  
tgcggtctga cgccaaccac accagcctgc ccgcctcggc gcgcgaggcc 1000  
ttccgcgtg gcctcaaggt gtccttcgcc aacttcatcc agtacctgct 1050  
ggaccgcac acggagaagc tggcgccctt caacgagcac tggcggcagg 1100  
tgtaccgct ctgccaccg tgccagatcg actacgactt cgtggggaag 1150  
ctggagactc tggacgagga cgccgcgcag ctgctgcagc tactccaggt 1200  
ggaccggcag ctccgcttcc ccccgagcta ccggaacagg accgccagca 1250  
gctgggagga ggactggttc gccaatatcc ccctggcctg gaggcagcag 1300  
ctgtataaac tctacgagge cgactttgtt ctcttcgggt accccaagcc 1350  
cgaaaacctc ctccgagact gaaagctttc gcgttgcttt ttctcgctg 1400  
cctggaacct gacgcacgcg cactccagtt ttttatgac ctacgatttt 1450  
gcaatctggg cttcttggtc actccactgc ctctatccat tgagtactgt 1500  
atcgatattg ttttttaaga ttaatatatt tcaggtattt aatacga 1547

<210> 466

<211> 414

<212> PRT

<213> Homo sapiens

<400> 466

Met	Thr	Lys	Ala	Arg	Leu	Phe	Arg	Leu	Trp	Leu	Val	Leu	Gly	Ser
1					5				10					15
Val	Phe	Met	Ile	Leu	Leu	Ile	Ile	Val	Tyr	Trp	Asp	Ser	Ala	Gly
				20					25					30
Ala	Ala	His	Phe	Tyr	Leu	His	Thr	Ser	Phe	Ser	Arg	Pro	His	Thr
				35					40					45
Gly	Pro	Pro	Leu	Pro	Thr	Pro	Gly	Pro	Asp	Arg	Asp	Arg	Glu	Leu
				50					55					60

Thr	Ala	Asp	Ser	Asp	Val	Asp	Glu	Phe	Leu	Asp	Lys	Phe	Leu	Ser	65	70	75
Ala	Gly	Val	Lys	Gln	Ser	Asp	Leu	Pro	Arg	Lys	Glu	Thr	Glu	Gln	80	85	90
Pro	Pro	Ala	Pro	Gly	Ser	Met	Glu	Glu	Ser	Val	Arg	Gly	Tyr	Asp	95	100	105
Trp	Ser	Pro	Arg	Asp	Ala	Arg	Arg	Ser	Pro	Asp	Gln	Gly	Arg	Gln	110	115	120
Gln	Ala	Glu	Arg	Arg	Ser	Val	Leu	Arg	Gly	Phe	Cys	Ala	Asn	Ser	125	130	135
Ser	Leu	Ala	Phe	Pro	Thr	Lys	Glu	Arg	Ala	Phe	Asp	Asp	Ile	Pro	140	145	150
Asn	Ser	Glu	Leu	Ser	His	Leu	Ile	Val	Asp	Asp	Arg	His	Gly	Ala	155	160	165
Ile	Tyr	Cys	Tyr	Val	Pro	Lys	Val	Ala	Cys	Thr	Asn	Trp	Lys	Arg	170	175	180
Val	Met	Ile	Val	Leu	Ser	Gly	Ser	Leu	Leu	His	Arg	Gly	Ala	Pro	185	190	195
Tyr	Arg	Asp	Pro	Leu	Arg	Ile	Pro	Arg	Glu	His	Val	His	Asn	Ala	200	205	210
Ser	Ala	His	Leu	Thr	Phe	Asn	Lys	Phe	Trp	Arg	Arg	Tyr	Gly	Lys	215	220	225
Leu	Ser	Arg	His	Leu	Met	Lys	Val	Lys	Leu	Lys	Lys	Tyr	Thr	Lys	230	235	240
Phe	Leu	Phe	Val	Arg	Asp	Pro	Phe	Val	Arg	Leu	Ile	Ser	Ala	Phe	245	250	255
Arg	Ser	Lys	Phe	Glu	Leu	Glu	Asn	Glu	Glu	Phe	Tyr	Arg	Lys	Phe	260	265	270
Ala	Val	Pro	Met	Leu	Arg	Leu	Tyr	Ala	Asn	His	Thr	Ser	Leu	Pro	275	280	285
Ala	Ser	Ala	Arg	Glu	Ala	Phe	Arg	Ala	Gly	Leu	Lys	Val	Ser	Phe	290	295	300
Ala	Asn	Phe	Ile	Gln	Tyr	Leu	Leu	Asp	Pro	His	Thr	Glu	Lys	Leu	305	310	315
Ala	Pro	Phe	Asn	Glu	His	Trp	Arg	Gln	Val	Tyr	Arg	Leu	Cys	His	320	325	330
Pro	Cys	Gln	Ile	Asp	Tyr	Asp	Phe	Val	Gly	Lys	Leu	Glu	Thr	Leu	335	340	345

Asp Glu Asp Ala Ala Gln Leu Leu Gln Leu Leu Gln Val Asp Arg  
 350 355 360  
 Gln Leu Arg Phe Pro Pro Ser Tyr Arg Asn Arg Thr Ala Ser Ser  
 365 370 375  
 Trp Glu Glu Asp Trp Phe Ala Lys Ile Pro Leu Ala Trp Arg Gln  
 380 385 390  
 Gln Leu Tyr Lys Leu Tyr Glu Ala Asp Phe Val Leu Phe Gly Tyr  
 395 400 405  
 Pro Lys Pro Glu Asn Leu Leu Arg Asp  
 410

<210> 467  
 <211> 1071  
 <212> DNA  
 <213> Homo sapiens

<400> 467  
 tcgggccaga attcggcacg aggcggcacg agggcgacgg cctcacgggg 50  
 ctttgagagt gaaagaggcc cagagtagag agagagagag accgacgtac 100  
 acgggatggc tacgggaacg cgctatgccg ggaaggtggg ggtcgtgacc 150  
 gggggcgggc gcggcatcgg agctgggatc gtgcgcgcct tcgtgaacag 200  
 cggggcccca gtggttatct gcgacaagga tgagtctggg ggccggggcc 250  
 tggagcagga gctccctgga gctgtcttta tcctctgtga tgtgactcag 300  
 gaagatgatg tgaagaccct ggtttctgag accatccgcc gatttggccg 350  
 cctggattgt gttgtcaaca acgctggcca ccacccaccc ccacagaggc 400  
 ctgaggagac ctctgcccag ggattccgcc agctgctgga gctgaaccta 450  
 ctggggacgt acaccttgac caagctcgcc ctcccctacc tgcggaagag 500  
 tcaagggaat gtcacaaaca tctccagcct ggtgggggca atcggccagg 550  
 cccaggcagt tccctatgtg gccaccaagg gggcagtaac agccatgacc 600  
 aaagctttgg ccctggatga aagtccatat ggtgtccgag tcaactgtat 650  
 ctccccagga aacatctgga ccccgtgtg ggaggagctg gcagccttaa 700  
 tgccagaccc tagggccaca atccgagagg gcatgctggc ccagccactg 750  
 ggccgcatgg gccagcccgc tgaggctggg gctgcggcag tgttctggc 800  
 ctccgaagcc aacttctgca cgggcattga actgctctg acgggggggtg 850  
 cagagctggg gtacgggtgc aaggccagtc ggagcacccc cgtggacgcc 900

cccgatatcc cttcctgatt tctctcattt ctacttgggg ccccttccct 950  
 aggactctcc caccctaaac tccaacctgt atcagatgca gcccctcaagc 1000  
 ccttagactc taagcccagt tagcaagggtg ccgggtcacc ctgcagggttc 1050  
 ccataaaaac gatttgcagc c 1071

<210> 468

<211> 270

<212> PRT

<213> Homo sapiens

<400> 468

Met	Ala	Thr	Gly	Thr	Arg	Tyr	Ala	Gly	Lys	Val	Val	Val	Val	Thr
1				5					10					15
Gly	Gly	Gly	Arg	Gly	Ile	Gly	Ala	Gly	Ile	Val	Arg	Ala	Phe	Val
				20					25					30
Asn	Ser	Gly	Ala	Arg	Val	Val	Ile	Cys	Asp	Lys	Asp	Glu	Ser	Gly
				35					40					45
Gly	Arg	Ala	Leu	Glu	Gln	Glu	Leu	Pro	Gly	Ala	Val	Phe	Ile	Leu
				50					55					60
Cys	Asp	Val	Thr	Gln	Glu	Asp	Asp	Val	Lys	Thr	Leu	Val	Ser	Glu
				65					70					75
Thr	Ile	Arg	Arg	Phe	Gly	Arg	Leu	Asp	Cys	Val	Val	Asn	Asn	Ala
				80					85					90
Gly	His	His	Pro	Pro	Pro	Gln	Arg	Pro	Glu	Glu	Thr	Ser	Ala	Gln
				95					100					105
Gly	Phe	Arg	Gln	Leu	Leu	Glu	Leu	Asn	Leu	Leu	Gly	Thr	Tyr	Thr
				110					115					120
Leu	Thr	Lys	Leu	Ala	Leu	Pro	Tyr	Leu	Arg	Lys	Ser	Gln	Gly	Asn
				125					130					135
Val	Ile	Asn	Ile	Ser	Ser	Leu	Val	Gly	Ala	Ile	Gly	Gln	Ala	Gln
				140					145					150
Ala	Val	Pro	Tyr	Val	Ala	Thr	Lys	Gly	Ala	Val	Thr	Ala	Met	Thr
				155					160					165
Lys	Ala	Leu	Ala	Leu	Asp	Glu	Ser	Pro	Tyr	Gly	Val	Arg	Val	Asn
				170					175					180
Cys	Ile	Ser	Pro	Gly	Asn	Ile	Trp	Thr	Pro	Leu	Trp	Glu	Glu	Leu
				185					190					195
Ala	Ala	Leu	Met	Pro	Asp	Pro	Arg	Ala	Thr	Ile	Arg	Glu	Gly	Met
				200					205					210

Leu	Ala	Gln	Pro	Leu	Gly	Arg	Met	Gly	Gln	Pro	Ala	Glu	Val	Gly
				215					220					225
Ala	Ala	Ala	Val	Phe	Leu	Ala	Ser	Glu	Ala	Asn	Phe	Cys	Thr	Gly
				230					235					240
Ile	Glu	Leu	Leu	Val	Thr	Gly	Gly	Ala	Glu	Leu	Gly	Tyr	Gly	Cys
				245					250					255
Lys	Ala	Ser	Arg	Ser	Thr	Pro	Val	Asp	Ala	Pro	Asp	Ile	Pro	Ser
				260					265					270

<210> 469  
 <211> 687  
 <212> DNA  
 <213> Homo sapiens

<400> 469  
 aggcgggcag cagctgcagg ctgacctgc agcttggcgg aatggactgg 50  
 cctcacaacc tgctgtttct tcttaccatt tccatcttcc tggggctggg 100  
 ccagcccagg agccccaaaa gcaagaggaa ggggcaagg cggcctgggc 150  
 ccctggcccc tggccctcac caggtgccac tggacctggt gtcacggatg 200  
 aaaccgtatg cccgcatgga ggagtatgag aggaacatcg aggagatggt 250  
 ggcccagctg aggaacagct cagagctggc ccagagaaaag tgtgaggtca 300  
 acttgcagct gtggatgtcc aacaagagga gcctgtctcc ctggggctac 350  
 agcatcaacc acgaccccag ccgtatcccc gtggacctgc cggaggcacg 400  
 gtgcctgtgt ctgggctgtg tgaaccctt caccatgcag gaggaccgca 450  
 gcatggtgag cgtgccggtg ttcagccagg ttctgtgcg ccgccgcctc 500  
 tgcccgccac cgccccgcac agggccttgc cgccagcgcg cagtcattgga 550  
 gaccatcgct gtgggctgca cctgcatctt ctgaatcacc tggcccagaa 600  
 gccaggccag cagcccagaa ccatcctcct tgcaccttg tgccaagaaa 650  
 ggcctatgaa aagtaaacac tgacttttga aagcaag 687

<210> 470  
 <211> 180  
 <212> PRT  
 <213> Homo sapiens

<400> 470  
 Met Asp Trp Pro His Asn Leu Leu Phe Leu Leu Thr Ile Ser Ile  
 1 5 10 15  
 Phe Leu Gly Leu Gly Gln Pro Arg Ser Pro Lys Ser Lys Arg Lys  
 20 25 30



Gly	Gln	Gly	Arg	Pro	Gly	Pro	Leu	Ala	Pro	Gly	Pro	His	Gln	Val
				35					40					45
Pro	Leu	Asp	Leu	Val	Ser	Arg	Met	Lys	Pro	Tyr	Ala	Arg	Met	Glu
				50					55					60
Glu	Tyr	Glu	Arg	Asn	Ile	Glu	Glu	Met	Val	Ala	Gln	Leu	Arg	Asn
				65					70					75
Ser	Ser	Glu	Leu	Ala	Gln	Arg	Lys	Cys	Glu	Val	Asn	Leu	Gln	Leu
				80					85					90
Trp	Met	Ser	Asn	Lys	Arg	Ser	Leu	Ser	Pro	Trp	Gly	Tyr	Ser	Ile
				95					100					105
Asn	His	Asp	Pro	Ser	Arg	Ile	Pro	Val	Asp	Leu	Pro	Glu	Ala	Arg
				110					115					120
Cys	Leu	Cys	Leu	Gly	Cys	Val	Asn	Pro	Phe	Thr	Met	Gln	Glu	Asp
				125					130					135
Arg	Ser	Met	Val	Ser	Val	Pro	Val	Phe	Ser	Gln	Val	Pro	Val	Arg
				140					145					150
Arg	Arg	Leu	Cys	Pro	Pro	Pro	Pro	Arg	Thr	Gly	Pro	Cys	Arg	Gln
				155					160					165
Arg	Ala	Val	Met	Glu	Thr	Ile	Ala	Val	Gly	Cys	Thr	Cys	Ile	Phe
				170					175					180

<210> 471

<211> 2368

<212> DNA

<213> Homo sapiens

<400> 471

```

gcgccgcag gcgtaggcgg ggtggccctt gcgtctcccg cttccttgaa 50
aaaccggcg ggcgagcgag gctgcgggcc ggccgctgcc cttccccaca 100
ctccccgccg agaagcctcg ctcggcgccc aacatggcgg gtgggcgctg 150
cggcccgcag ctaacggcgc tctggccgc ctggatcgcg gctgtggcgg 200
cgacggcagg ccccgaggag gccgcgctgc cgccggagca gagccgggtc 250
cagcccatga ccgcctccaa ctggacgctg gtgatggagg gcgagtggat 300
gctgaaattt tacgccccat ggtgtccatc ctgccagcag actgattcag 350
aatgggaggc ttttgcaaag aatggtgaaa tacttcagat cagtgtgggg 400
aaggtagatg tcattcaaga accaggtttg agtggccgct tctttgtcac 450
cactctccca gcattttttc atgcaaagga tgggatattc cgccgttata 500

```

gtggcccagg aatcttcgaa gacctgcaga attatatctt agagaagaaa 550  
tggcaatcag tcgagcctct gactggctgg aaatccccag cttctctaac 600  
gatgtctgga atggctggtc tttttagcat ctctggcaag atatggcatc 650  
ttcacaaacta tttcacagtg actcttgga ttcctgcttg gtgttcttat 700  
gtgtttttcg tcatagccac cttggttttt ggctttttta tgggtctggt 750  
cttggtggtg atatcagaat gtttctatgt gccacttcca aggcatatat 800  
ctgagcgctt tgagcagaat cggagatcag aggaggctca tagagctgaa 850  
cagttgcagg atgcggagga ggaaaaagat gattcaaatg aagaagaaaa 900  
caaagacagc cttgtagatg atgaagaaga gaaagaagat cttggcgatg 950  
aggatgaagc agaggaagaa gaggaggagg acaacttggc tgctggtgtg 1000  
gatgaggaga gaagtgaggc caatgatcag gggccccag gagaggacgg 1050  
tgtgaccggg gaggaagtag agcctgagga ggctgaagaa ggcatctctg 1100  
agcaaccctg cccagctgac acagaggtgg tggaagactc cttgaggcag 1150  
cgtaaaagtc agcatgctga caagggactg tagatttaat gatgcgtttt 1200  
caagaataca caccaaaaca atatgtcagc ttccctttgg cctgcagttt 1250  
gtaccaaadc cttaattttt cctgaatgag caagcttctc ttaaaagatg 1300  
ctctctagtc atttggctct atggcagtaa gcctcatgta tactaaggag 1350  
agtcttccag gtgtgacaat caggatatag aaaaacaaac gtagtggttg 1400  
gatctgtttg gagactggga tgggaacaag ttcatttact taggggtcag 1450  
agagtctcga ccagaggagg ccattcccag tcctaatacag caccttccag 1500  
agacaaggct gcaggccctg tgaaatgaaa gccaagcagg agccttggct 1550  
cctgagcatc cccaaagtgt aacgtagaag ccttgcattc ttttcttggt 1600  
taaagtattt atttttgtca aattgcagga aacatcaggc accacagtgc 1650  
atgaaaaatc tttcacagct agaaattgaa agggccttgg gtatagagag 1700  
cagctcagaa gtcattcccag ccctctgaat ctctgtgct atgttttatt 1750  
tcttaccttt aatttttcca gcatttccac catgggcatt caggctctcc 1800  
acactcttca ctattatctc ttggtcagag gactccaata acagccagg 1850  
ttacatgaac tgtgtttgtt cattctgacc taaggggttt agataatcag 1900  
taaccataac ccctgaagct gtgactgcca aacatctcaa atgaaatgtt 1950

gtggccatca gagactcaaa aggaagtaag gattttacaa gacagattaa 2000  
 aaaaaaattg ttttgtccaa aatatagttg ttgttgattt tttttaagt 2050  
 tttctaagca atatttttca agccagaagt cctctaagtc ttgccagtac 2100  
 aaggtagtct tgtgaagaaa agttgaatac tgttttgttt tcatctcaag 2150  
 gggttccctg ggtcttgaac tactttaata ataactaaaa aaccacttct 2200  
 gattttcctt cagtgatgtg cttttggtga aagaattaat gaactccagt 2250  
 acctgaaagt gaaagatttg attttgtttc catcttctgt aatcttccaa 2300  
 agaattatat ctttgtaaata ctctcaatac tcaatctact gtaagtaccc 2350  
 agggaggcta atttcttt 2368

<210> 472

<211> 349

<212> PRT

<213> Homo sapiens

<400> 472

Met	Ala	Gly	Gly	Arg	Cys	Gly	Pro	Gln	Leu	Thr	Ala	Leu	Leu	Ala	1	5	10	15
Ala	Trp	Ile	Ala	Ala	Val	Ala	Ala	Thr	Ala	Gly	Pro	Glu	Glu	Ala	20	25	30	
Ala	Leu	Pro	Pro	Glu	Gln	Ser	Arg	Val	Gln	Pro	Met	Thr	Ala	Ser	35	40	45	
Asn	Trp	Thr	Leu	Val	Met	Glu	Gly	Glu	Trp	Met	Leu	Lys	Phe	Tyr	50	55	60	
Ala	Pro	Trp	Cys	Pro	Ser	Cys	Gln	Gln	Thr	Asp	Ser	Glu	Trp	Glu	65	70	75	
Ala	Phe	Ala	Lys	Asn	Gly	Glu	Ile	Leu	Gln	Ile	Ser	Val	Gly	Lys	80	85	90	
Val	Asp	Val	Ile	Gln	Glu	Pro	Gly	Leu	Ser	Gly	Arg	Phe	Phe	Val	95	100	105	
Thr	Thr	Leu	Pro	Ala	Phe	Phe	His	Ala	Lys	Asp	Gly	Ile	Phe	Arg	110	115	120	
Arg	Tyr	Arg	Gly	Pro	Gly	Ile	Phe	Glu	Asp	Leu	Gln	Asn	Tyr	Ile	125	130	135	
Leu	Glu	Lys	Lys	Trp	Gln	Ser	Val	Glu	Pro	Leu	Thr	Gly	Trp	Lys	140	145	150	
Ser	Pro	Ala	Ser	Leu	Thr	Met	Ser	Gly	Met	Ala	Gly	Leu	Phe	Ser	155	160	165	

Ile	Ser	Gly	Lys	Ile	Trp	His	Leu	His	Asn	Tyr	Phe	Thr	Val	Thr	
				170					175					180	
Leu	Gly	Ile	Pro	Ala	Trp	Cys	Ser	Tyr	Val	Phe	Phe	Val	Ile	Ala	
				185					190					195	
Thr	Leu	Val	Phe	Gly	Leu	Phe	Met	Gly	Leu	Val	Leu	Val	Val	Ile	
				200					205					210	
Ser	Glu	Cys	Phe	Tyr	Val	Pro	Leu	Pro	Arg	His	Leu	Ser	Glu	Arg	
				215					220					225	
Ser	Glu	Gln	Asn	Arg	Arg	Ser	Glu	Glu	Ala	His	Arg	Ala	Glu	Gln	
				230					235					240	
Leu	Gln	Asp	Ala	Glu	Glu	Glu	Lys	Asp	Asp	Ser	Asn	Glu	Glu	Glu	
				245					250					255	
Asn	Lys	Asp	Ser	Leu	Val	Asp	Asp	Glu	Glu	Glu	Lys	Glu	Asp	Leu	
				260					265					270	
Gly	Asp	Glu	Asp	Glu	Ala	Glu	Glu	Glu	Glu	Glu	Glu	Asp	Asn	Leu	
				275					280					285	
Ala	Ala	Gly	Val	Asp	Glu	Glu	Arg	Ser	Glu	Ala	Asn	Asp	Gln	Gly	
				290					295					300	
Pro	Pro	Gly	Glu	Asp	Gly	Val	Thr	Arg	Glu	Glu	Val	Glu	Pro	Glu	
				305					310					315	
Glu	Ala	Glu	Glu	Gly	Ile	Ser	Glu	Gln	Pro	Cys	Pro	Ala	Asp	Thr	
				320					325					330	
Glu	Val	Val	Glu	Asp	Ser	Leu	Arg	Gln	Arg	Lys	Ser	Gln	His	Ala	
				335					340					345	

Asp Lys Gly Leu

<210> 473

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 473

gtccagccca tgaccgcctc caac 24

<210> 474

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 474

ctctcctcat ccacaccagc agcc 24

<210> 475

<211> 44

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 475

gtggatgctg aaattttacg ccccatgggtg tccatcctgc cagc 44

<210> 476

<211> 2478

<212> DNA

<213> Homo sapiens

<400> 476

atctgggtga actacttaag cttaatttgt taaactccgg taagtaccta 50  
gccacatga tttgactcag agattctctt ttgtccacag acagtcattc 100  
caggggcaga aagaaaagag ctcccaaattg ctatatctat tcaggggctc 150  
tcaagaacaa tggaaatca tcttgattta gaaaatttgg atgaagatgg 200  
atatactcaa ttacacttgc actctcaaag caataccagg atagctgttg 250  
tttcagagaa aggatcgtgt gctgcatctc ctcttggcg cctcattgct 300  
gtaatttttg gaatcctatg cttggtaata ctgggatag ctgtggtcct 350  
gggtaccatg ggggttcttt ccagcccttg tctcctaatt tggattatat 400  
atgagaagag ctgttatcta ttcagcatgt cactaaattc ctgggatgga 450  
agtaaaagac aatgctggca actgggctct aatctcctaa agatagacag 500  
ctcaaataaa ttgggattta tagtaaaaca agtgtcttcc caacctgata 550  
attcattttg gataggcctt tctcgcccc agactgaggt accatggctc 600  
tgaggaggat gatcaacatt ctcttctaac ttatttcaga tcagaaccac 650  
agctacccaa gaaaacccat ctccaaattg tgtatggatt cacgtgtcag 700  
tcatttatga ccaactgtgt agtgtgccct catatagtat ttgtgagaag 750  
aagttttcaa tgtaagagga aggggtggaga aggagagaga aatatgtgag 800  
gtagtaagga ggacagaaaa cagaacagaa aagagtaaca gctgaggtca 850  
agataaatgc agaaaatggt tagagagctt ggccaactgt aatcttaacc 900

aagaaattga agggagagggc tgtgatttct gtatttgtcg acctacaggt 950  
aggctagtat tatttttcta gttagtagat ccctagacat ggaatcaggg 1000  
cagccaagct tgagttttta ttttttattt atttattttt ttgagatagg 1050  
gtctcacttt gttaccagg ctggagtgc gtggcacaat ctcgactcac 1100  
tgcagctatc tctcgctca gccctcaag tagctgggac tacagggtgca 1150  
tgccaccatg ccaggctaata ttttggtgtt tttttagag actgggtttt 1200  
gccatgttga ccaagctggc ctctaactcc tgggcttaag tgatctgcc 1250  
gccttggcct cccaaagtgc tgggattaca gatgtgagcc accacacctg 1300  
gccccaaagct tgaattttca ttctgccatt gacttggcat ttaccttggg 1350  
taagccataa gcgaatctta atttctggct ctatcagagt tgtttcatgc 1400  
tcaacaatgc cattgaagtg cacggtgtgt tgccacgatt tgaccctcaa 1450  
cttctagcag tatatcagtt atgaactgag ggtgaaatat atttctgaat 1500  
agctaaatga agaaatggga aaaaatcttc accacagtca gagcaatttt 1550  
attattttca tcagtatgat cataattatg attatcatct tagtaaaaag 1600  
caggaactcc tactttttct ttatcaatta aatagctcag agagtacatc 1650  
tgccatctct ctaatagaat cttttttttt tttttttttt tttgagacag 1700  
agtttcgctc ttgttgccca ggctggagt'g caacggcacg atctcggtc 1750  
accgcaacct ccgccccctg ggttcaagca attctcctgc ctcagcctcc 1800  
caagtagctg ggattacagt caggcaccac cacaccggc taattttgta 1850  
tttttttagt agagacaggg tttctccatg tcggtcaggg tagtcccga 1900  
ctctgacct caagtgatct gcctgcctcg gcctcccaag tgctgggatt 1950  
acaggcgtga gccactgcac ccagcctaga atcttgtata atatgtaatt 2000  
gtagggaaac tgctctcata ggaaagtttt ctgcttttta aatacaaaaa 2050  
tacataaaaa tacataaaat ctgatgatga atataaaaaa gtaaccaacc 2100  
tcattggaac aagtattaac attttggaa atgttttatt agttttgtga 2150  
tgtactgttt tacaattttt accatttttt tcagtaatta ctgtaaaatg 2200  
gtattattgg aatgaaacta tatttcctca tgtgctgatt tgtcttattt 2250  
ttttcatact ttcccactgg tgctattttt atttccaatg gatatttctg 2300

tattactagg gaggcattta cagtcctcta atgttgatta atatgtgaaa 2350  
 agaaattgta ccaatttttac taaattatgc agtttaaaat ggatgatttt 2400  
 atgttatgtg gatttcattt caataaaaaa aaactcttat caaaaaaaaaa 2450  
 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 2478

<210> 477  
 <211> 201  
 <212> PRT  
 <213> Homo sapiens

<400> 477

Met	Glu	Tyr	His	Pro	Asp	Leu	Glu	Asn	Leu	Asp	Glu	Asp	Gly	Tyr	1	5	10	15
Thr	Gln	Leu	His	Phe	Asp	Ser	Gln	Ser	Asn	Thr	Arg	Ile	Ala	Val	20	25	30	
Val	Ser	Glu	Lys	Gly	Ser	Cys	Ala	Ala	Ser	Pro	Pro	Trp	Arg	Leu	35	40	45	
Ile	Ala	Val	Ile	Leu	Gly	Ile	Leu	Cys	Leu	Val	Ile	Leu	Val	Ile	50	55	60	
Ala	Val	Val	Leu	Gly	Thr	Met	Gly	Val	Leu	Ser	Ser	Pro	Cys	Pro	65	70	75	
Pro	Asn	Trp	Ile	Ile	Tyr	Glu	Lys	Ser	Cys	Tyr	Leu	Phe	Ser	Met	80	85	90	
Ser	Leu	Asn	Ser	Trp	Asp	Gly	Ser	Lys	Arg	Gln	Cys	Trp	Gln	Leu	95	100	105	
Gly	Ser	Asn	Leu	Leu	Lys	Ile	Asp	Ser	Ser	Asn	Glu	Leu	Gly	Phe	110	115	120	
Ile	Val	Lys	Gln	Val	Ser	Ser	Gln	Pro	Asp	Asn	Ser	Phe	Trp	Ile	125	130	135	
Gly	Leu	Ser	Arg	Pro	Gln	Thr	Glu	Val	Pro	Trp	Leu	Trp	Glu	Asp	140	145	150	
Gly	Ser	Thr	Phe	Ser	Ser	Asn	Leu	Phe	Gln	Ile	Arg	Thr	Thr	Ala	155	160	165	
Thr	Gln	Glu	Asn	Pro	Ser	Pro	Asp	Cys	Val	Trp	Ile	His	Val	Ser	170	175	180	
Val	Ile	Tyr	Asp	Gln	Leu	Cys	Ser	Val	Pro	Ser	Tyr	Ser	Ile	Cys	185	190	195	
Glu	Lys	Lys	Phe	Ser	Met	200												

<210> 478

<211> 27  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 478  
gtccacagac agtcatctca ggagcag 27

<210> 479  
<211> 20  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 479  
acaagtgtct tcccaacctg 20

<210> 480  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 480  
atcctcccag agccatggta cctc 24

<210> 481  
<211> 51  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 481  
ccaaggatag ctgttgtttc agagaaagga tcgtgtgctg catctcctcc 50

t 51

<210> 482  
<211> 3819  
<212> DNA  
<213> Homo sapiens

<400> 482  
ggaaggggag gagcaggcca cacaggcaca ggccggtgag ggacctgccc 50  
agacctggag ggtctcgctc tgtcacacag gctggagtgc agtgggtgtga 100  
tcttggtca tcgtaacctc cacctcccgg gttcaagtga ttctcatgcc 150



tcagcctccc gagtagctgg gattacaggt ggtgacttcc aagagtgact 200  
ccgtcggagg aaaatgactc ccagtcgct gctgcagacg aactgttcc 250  
tgctgagtct gctcttcctg gtccaaggtg cccacggcag gggccacagg 300  
gaagactttc gcttctgcag ccagcggaaac cagacacaca ggagcagcct 350  
ccactacaaa cccacaccag acctgcgcat ctccatcgag aactccgaag 400  
aggccctcac agtccatgcc cctttccctg cagcccaccc tgcttcccga 450  
tccttccctg accccagggg cctctaccac ttctgcctct actggaaccg 500  
acatgctggg agattacatc ttctctatgg caagcgtgac ttcttgctga 550  
gtgacaaagc ctctagcctc ctctgcttcc agcaccagga ggagagcctg 600  
gctcagggcc ccccgctgtt agccacttct gtcacctcct ggtggagccc 650  
tcagaacatc agcctgccca gtgcgcccag cttcaccttc tccttcaca 700  
gtcctcccca cacggccgct cacaatgctt cgggtggacat gtgcgagctc 750  
aaaagggacc tccagctgct cagccagttc ctgaagcatc cccagaaggc 800  
ctcaaggagg ccctcggtg ccccgcccag ccagcagttg cagagcctgg 850  
agtcgaaact gacctctgtg agattcatgg gggacatggt gtccttcgag 900  
gaggaccgga tcaacgccac ggtgtggaag ctccagcca cagccggcct 950  
ccaggacctg cacatccact cccggcagga ggaggagcag agcgagatca 1000  
tgagtgactc ggtgctgctg cctcgaacac tcttcagag gacgaaaggc 1050  
cggagcgggg aggtgagaa gagactcctc ctggtggact tcagcagcca 1100  
agccctgttc caggacaaga attccagcca agtcctgggt gagaaggtct 1150  
tggggattgt ggtacagaac accaaagtag ccaacctcac ggagcccgtg 1200  
gtgctcactt tccagcacca gctacagccg aagaatgtga ctctgcaatg 1250  
tgtgttctgg gttgaagacc ccacattgag cagcccgggg cattggagca 1300  
gtgctgggtg tgagaccgtc aggagagaaa cccaaacatc ctgcttctgc 1350  
aaccacttga cctactttgc agtgctgatg gtctcctcgg tggaggtgga 1400  
cgccgtgcac aagcactacc tgagcctcct ctctacgtg ggtgtgtcg 1450  
tctctgcctt ggctgcctt gtcaccattg ccgcctacct ctgctccagg 1500  
gtgcccctgc cgtgcaggag gaaacctcgg gactacacca tcaaggtgca 1550  
catgaacctg ctgctggccg tcttctgct ggacacgagc ttctgctca 1600

gcgagccggt ggcctgaca ggctctgagg ctggctgccg agccagtgcc 1650  
atcttcctgc acttctccct gctcacctgc ctttcctgga tgggcctcga 1700  
ggggtacaac ctctaccgac tcgtgggtgga ggtcttttggc acctatgtcc 1750  
ctggctacct actcaagctg agcgccatgg gctggggctt ccccatcttt 1800  
ctggtgacgc tgggtggccct ggtggatgtg gacaactatg gccccatcat 1850  
cttggctgtg cataggactc cagagggcgt catctaccct tccatgtgct 1900  
ggatccggga ctccctggtc agctacatca ccaacctggg cctcttcagc 1950  
ctggtgtttc tgttcaacat ggccatgcta gccaccatgg tgggtcagat 2000  
cctgcggctg cgtccccaca cccaaaagtg gtcacatgtg ctgacactgc 2050  
tgggcctcag cctggtcctt ggctgccct gggccttgat cttcttctcc 2100  
tttgcttctg gcaccttcca gcttgctgc ctctacctt tcagcatcat 2150  
cacctccttc caaggcttcc tcctcttcat ctggtactgg tccatgcggc 2200  
tgcaggcccg ggggtggcccc tcccctctga agagcaactc agacagcgcc 2250  
aggctcccca tcagctcggg cagcacctcg tccagccgca tctaggcctc 2300  
cagcccacct gcccatgtga tgaagcagag atgcggcctc gtcgcacact 2350  
gcctgtggcc cccgagccag gccagcccc aggcagtcg gccgcagact 2400  
ttggaaagcc caacgaccat ggagagatgg gccgttgcca tgggtggacgg 2450  
actcccgggc tgggcttttg aattggcctt ggggactact cggctctcac 2500  
tcagctccca cgggactcag aagtgcgccg ccatgctgcc tagggtactg 2550  
tccccacatc tgtcccaacc cagctggagg cctggtctct ccttacaacc 2600  
cctgggcccc gccctcattg ctgggggcca ggccttgat cttgagggtc 2650  
tggcacatcc ttaatcctgt gccctgcct gggacagaaa tgtggctcca 2700  
gttgctctgt ctctcgtggg caccctgagg gcactctgca tcctctgtca 2750  
ttttaacctc aggtggcacc cagggcgaat ggggcccagg gcagaccttc 2800  
agggccagag ccctggcgga ggagaggccc ttgcccagga gcacagcagc 2850  
agctgccta cctctgagcc caggccccct ccctccctca gccccccagt 2900  
cctccctcca tcttccctgg ggttctcctc ctctcccagg gcctccttgc 2950  
tccttcgttc acagctgggg gtccccgatt ccaatgctgt tttttgggga 3000

gtggtttcca ggagctgcct ggtgtctgct gtaaattgtt gtctactgca 3050  
 caagcctcgg cctgcccctg agccaggctc ggtaccgatg cgtgggctgg 3100  
 gctagggtccc tctgtccatc tgggcctttg tatgagctgc attgcccttg 3150  
 ctcaccctga ccaagcacac gcctcagagg ggcctcagc ctctcctgaa 3200  
 gccctcttgt ggcaagaact gtggaccatg ccagtcccgt ctggtttcca 3250  
 tcccaccact ccaaggactg agactgacct cctctggtga cactggccta 3300  
 gagcctgaca ctctcctaag aggttctctc caagcccca aatagctcca 3350  
 ggcgccctcg gccgcccatc atggttaatt ctgtccaaca aacacacacg 3400  
 ggtagattgc tggcctgttg taggtggtag ggacacagat gaccgacctg 3450  
 gtcactcctc ctgccaatat tcagtctggt atgtgaggcg tgcgtgaagc 3500  
 aagaactcct ggagctacag ggacaggag ccatcattcc tgcctgggaa 3550  
 tcctggaaga ctctctgcag gagtcagcgt tcaatcttga ccttgaagat 3600  
 gggaaggatg ttctttttac gtaccaattc ttttgtcttt tgatattaaa 3650  
 aagaagtaca tggtcattgt agagaatttg gaaactgtag aagagaatca 3700  
 agaagaaaaa taaaaatcag ctgttgtaat cgcctagcaa aaaaaaaaaa 3750  
 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 3800  
 aaaaaaaaaa aaaaaaaaaa 3819

<210> 483

<211> 693

<212> PRT

<213> Homo sapiens

<400> 483

Met	Thr	Pro	Gln	Ser	Leu	Leu	Gln	Thr	Thr	Leu	Phe	Leu	Leu	Ser
1				5					10					15
Leu	Leu	Phe	Leu	Val	Gln	Gly	Ala	His	Gly	Arg	Gly	His	Arg	Glu
				20					25					30
Asp	Phe	Arg	Phe	Cys	Ser	Gln	Arg	Asn	Gln	Thr	His	Arg	Ser	Ser
				35					40					45
Leu	His	Tyr	Lys	Pro	Thr	Pro	Asp	Leu	Arg	Ile	Ser	Ile	Glu	Asn
				50					55					60
Ser	Glu	Glu	Ala	Leu	Thr	Val	His	Ala	Pro	Phe	Pro	Ala	Ala	His
				65					70					75
Pro	Ala	Ser	Arg	Ser	Phe	Pro	Asp	Pro	Arg	Gly	Leu	Tyr	His	Phe
				80					85					90

Cys Leu Tyr Trp Asn Arg His Ala Gly Arg Leu His Leu Leu Tyr	95	100	105
Gly Lys Arg Asp Phe Leu Leu Ser Asp Lys Ala Ser Ser Leu Leu	110	115	120
Cys Phe Gln His Gln Glu Glu Ser Leu Ala Gln Gly Pro Pro Leu	125	130	135
Leu Ala Thr Ser Val Thr Ser Trp Trp Ser Pro Gln Asn Ile Ser	140	145	150
Leu Pro Ser Ala Ala Ser Phe Thr Phe Ser Phe His Ser Pro Pro	155	160	165
His Thr Ala Ala His Asn Ala Ser Val Asp Met Cys Glu Leu Lys	170	175	180
Arg Asp Leu Gln Leu Leu Ser Gln Phe Leu Lys His Pro Gln Lys	185	190	195
Ala Ser Arg Arg Pro Ser Ala Ala Pro Ala Ser Gln Gln Leu Gln	200	205	210
Ser Leu Glu Ser Lys Leu Thr Ser Val Arg Phe Met Gly Asp Met	215	220	225
Val Ser Phe Glu Glu Asp Arg Ile Asn Ala Thr Val Trp Lys Leu	230	235	240
Gln Pro Thr Ala Gly Leu Gln Asp Leu His Ile His Ser Arg Gln	245	250	255
Glu Glu Glu Gln Ser Glu Ile Met Glu Tyr Ser Val Leu Leu Pro	260	265	270
Arg Thr Leu Phe Gln Arg Thr Lys Gly Arg Ser Gly Glu Ala Glu	275	280	285
Lys Arg Leu Leu Leu Val Asp Phe Ser Ser Gln Ala Leu Phe Gln	290	295	300
Asp Lys Asn Ser Ser Gln Val Leu Gly Glu Lys Val Leu Gly Ile	305	310	315
Val Val Gln Asn Thr Lys Val Ala Asn Leu Thr Glu Pro Val Val	320	325	330
Leu Thr Phe Gln His Gln Leu Gln Pro Lys Asn Val Thr Leu Gln	335	340	345
Cys Val Phe Trp Val Glu Asp Pro Thr Leu Ser Ser Pro Gly His	350	355	360
Trp Ser Ser Ala Gly Cys Glu Thr Val Arg Arg Glu Thr Gln Thr	365	370	375

Ser Cys Phe Cys Asn His Leu Thr Tyr Phe Ala Val Leu Met Val	380	385	390
Ser Ser Val Glu Val Asp Ala Val His Lys His Tyr Leu Ser Leu	395	400	405
Leu Ser Tyr Val Gly Cys Val Val Ser Ala Leu Ala Cys Leu Val	410	415	420
Thr Ile Ala Ala Tyr Leu Cys Ser Arg Val Pro Leu Pro Cys Arg	425	430	435
Arg Lys Pro Arg Asp Tyr Thr Ile Lys Val His Met Asn Leu Leu	440	445	450
Leu Ala Val Phe Leu Leu Asp Thr Ser Phe Leu Leu Ser Glu Pro	455	460	465
Val Ala Leu Thr Gly Ser Glu Ala Gly Cys Arg Ala Ser Ala Ile	470	475	480
Phe Leu His Phe Ser Leu Leu Thr Cys Leu Ser Trp Met Gly Leu	485	490	495
Glu Gly Tyr Asn Leu Tyr Arg Leu Val Val Glu Val Phe Gly Thr	500	505	510
Tyr Val Pro Gly Tyr Leu Leu Lys Leu Ser Ala Met Gly Trp Gly	515	520	525
Phe Pro Ile Phe Leu Val Thr Leu Val Ala Leu Val Asp Val Asp	530	535	540
Asn Tyr Gly Pro Ile Ile Leu Ala Val His Arg Thr Pro Glu Gly	545	550	555
Val Ile Tyr Pro Ser Met Cys Trp Ile Arg Asp Ser Leu Val Ser	560	565	570
Tyr Ile Thr Asn Leu Gly Leu Phe Ser Leu Val Phe Leu Phe Asn	575	580	585
Met Ala Met Leu Ala Thr Met Val Val Gln Ile Leu Arg Leu Arg	590	595	600
Pro His Thr Gln Lys Trp Ser His Val Leu Thr Leu Leu Gly Leu	605	610	615
Ser Leu Val Leu Gly Leu Pro Trp Ala Leu Ile Phe Phe Ser Phe	620	625	630
Ala Ser Gly Thr Phe Gln Leu Val Val Leu Tyr Leu Phe Ser Ile	635	640	645
Ile Thr Ser Phe Gln Gly Phe Leu Ile Phe Ile Trp Tyr Trp Ser	650	655	660

Met Arg Leu Gln Ala Arg Gly Gly Pro Ser Pro Leu Lys Ser Asn  
665 670 675

Ser Asp Ser Ala Arg Leu Pro Ile Ser Ser Gly Ser Thr Ser Ser  
680 685 690

Ser Arg Ile

<210> 484  
<211> 516  
<212> DNA  
<213> Homo sapiens

<220>  
<221> unsure  
<222> 68, 70, 84, 147  
<223> unknown base

<400> 484  
tgccctggcct gccttgtaa caatgccgct tactctgctt ccaggttgcc 50  
ctgccttgca gaggaaanct tcgggactac acctcaagt gcacatgaac 100  
ctgctgctgg ccgtcttctt gctggacacg agcttctctg tcagcgnagc 150  
cggtggccct gacaggctct gaaggctggc tgccgagcca gtgccatctt 200  
cctgcacttc tctgctcac ctgcctttcc tggatgggccc tcgaggggta 250  
caacctctac cgactcgtgg tggaggctctt tggcacctat gtccttggt 300  
acctactcaa gctgagcgcc atgggctggg gcttccccat ctttctggtg 350  
acgctgggtgg ccctgggtgga tgtggacaac tatggcccca tcattctggc 400  
tgtgcatagg actccagagg gcgtcatcta cccttccatg tgctggatcc 450  
gggactccct ggtcagctac atcaccaacg tgggcctctt cagcctggtg 500  
tttctgttca acatgg 516

<210> 485  
<211> 22  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 485  
ggcattggag cagtgtggg tg 22

<210> 486  
<211> 24  
<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 486

tggaggccta gatgcggctg gacg 24

<210> 487

<211> 2849

<212> DNA

<213> Homo sapiens

<220>

<221> unsure

<222> 2715

<223> unknown base

<400> 487

cggacgcgtg ggcggacgcg tgggcggacg cgtgggcgga cgcgtgggct 50  
ggttcaggtc caggttttgc ttgatcctt ttcaaaaact ggagacacag 100  
aagagggctc taggaaaaag ttttgatgg gattatgtgg aaactaccct 150  
gcgattctct gctgccagag caggctcggc gcttccaccc cagtgcagcc 200  
ttcccctggc ggtggtgaaa gagactcggg agtcgctgct tccaaagtgc 250  
ccgccgtgag tgagctctca cccagtcag ccaaatgagc ctcttcgggc 300  
ttctcctgct gacatctgcc ctggccggcc agagacaggg gactcaggcg 350  
gaatccaacc tgagtagtaa attccagttt tccagcaaca aggaacagaa 400  
cggagtacaa gatcctcagc atgagagaat tattactgtg tctactaatg 450  
gaagtattca cagcccaagg tttcctcata cttatccaag aaatacggtc 500  
ttggtatgga gattagtagc agtagaggaa aatgtatgga tacaacttac 550  
gtttgatgaa agatttgggc ttgaagaccc agaagatgac atatgcaagt 600  
atgattttgt agaagttgag gaacccagtg atggaactat attagggcgc 650  
tggtgtggtt ctggtactgt accaggaaaa cagatttcta aaggaaatca 700  
aattaggata agatttgtat ctgatgaata ttttccttct gaaccagggt 750  
tctgcatcca ctacaacatt gtcatgccac aattcacaga agctgtgagt 800  
ccttcagtg ctaacccctc agctttgcc ctggacctgc ttaataatgc 850  
tataactgcc tttagtagct tggaagacct tattcgatat cttgaaccag 900  
agagatggca gttggactta gaagatctat ataggccaac ttggcaactt 950

cttggaaggg cttttgtttt tggaagaaaa tccagagtgg tggatctgaa 1000  
ccttctaaca gaggaggtaa gattatacag ctgcacacct cgtaacttct 1050  
cagtgtccat aagggaagaa ctaaagagaa ccgataccat tttctggcca 1100  
ggttgtctcc tgggttaaag ctgtgggtgg aactgtgcct gttgtctcca 1150  
caattgcaat gaatgtcaat gtgtcccaag caaagttact aaaaaatacc 1200  
acgaggtcct tcagttgaga ccaaagaccg gtgtcagggg attgcacaaa 1250  
tcactcacgg acgtggccct ggagcaccat gaggagtgtg actgtgtgtg 1300  
cagagggagc acaggaggat agccgcacat ccaccagcag ctcttgccca 1350  
gagctgtgca gtgcagtggc tgattctatt agagaacgta tgcgttatct 1400  
ccatccttaa tctcagttgt ttgcttcaag gacctttcat cttcaggatt 1450  
tacagtgcac tctgaaagag gagacatcaa acagaattag gagttgtgca 1500  
acagctcttt tgagaggagg cctaaaggac aggagaaaag gtcttcaatc 1550  
gtggaaagaa aattaaatgt tgtattaaat agatcaccag ctagtttcag 1600  
agttaccatg tacgtattcc actagctggg ttctgtattt cagttctttc 1650  
gatacggcct agggtaatgt cagtacagga aaaaaactgt gcaagtgagc 1700  
acctgattcc gttgccttgc ttaactctaa agctccatgt cctgggccta 1750  
aaatcgtata aaatctggat tttttttttt ttttttgctc atattcacat 1800  
atgtaaacca gaacattcta tgtactacaa acctgggttt taaaaaggaa 1850  
ctatgttgct atgaattaaa cttgtgtcat gctgatagga cagactggat 1900  
ttttcatatt tcttattaaa atttctgcca tttagaagaa gagaactaca 1950  
ttcatgggtt ggaagagata aacctgaaaa gaagagtggc cttatcttca 2000  
ctttatcgat aagtcagttt atttggttca ttgtgtacat ttttatattc 2050  
tccttttgac attataactg ttggcttttc taatcttggt aaatatatct 2100  
atttttacca aaggatttta atattctttt ttatgacaac ttagatcaac 2150  
tatttttagc ttggtaaatt tttctaaaca caattgttat agccagagga 2200  
acaaagatga tataaaatat tgttgctctg acaaaaatac atgtatttca 2250  
ttctcgtatg gtgctagagt tagattaatc tgcattttta aaaactgaat 2300  
tggaatagaa ttggttaagt gcaaagactt tttgaaaata attaaattat 2350  
catatcttcc attcctgtta ttggagatga aaataaaaag caacttatga 2400



aagtagacat tcagatccag ccattactaa cctattcctt ttttggggaa 2450  
atctgagcct agctcagaaa aacataaagc accttgaaaa agacttggca 2500  
gcttctgat aaagcgtgct gtgctgtgca gtaggaacac atcctattta 2550  
ttgtgatgtt gtggttttat tatcttaaac tctgttccat acacttgtat 2600  
aaatacatgg atatTTTTat gtacagaagt atgtctctta accagttcac 2650  
ttattgtact ctggcaattt aaaagaaaat cagtaaaata ttttgcttgt 2700  
aaaatgctta atatngtgcc taggttatgt ggtgactatt tgaatcaaaa 2750  
atgtattgaa tcatcaata aaagaatgtg gctatTTTgg ggagaaaatt 2800  
aaaaaaaaa aaaaaaaaaa aggttttaggg ataacagggt aatgcggcc 2849

<210> 488

<211> 345

<212> PRT

<213> Homo sapiens

<400> 488

Met	Ser	Leu	Phe	Gly	Leu	Leu	Leu	Leu	Thr	Ser	Ala	Leu	Ala	Gly
1				5					10					15
Gln	Arg	Gln	Gly	Thr	Gln	Ala	Glu	Ser	Asn	Leu	Ser	Ser	Lys	Phe
				20					25					30
Gln	Phe	Ser	Ser	Asn	Lys	Glu	Gln	Asn	Gly	Val	Gln	Asp	Pro	Gln
				35					40					45
His	Glu	Arg	Ile	Ile	Thr	Val	Ser	Thr	Asn	Gly	Ser	Ile	His	Ser
				50					55					60
Pro	Arg	Phe	Pro	His	Thr	Tyr	Pro	Arg	Asn	Thr	Val	Leu	Val	Trp
				65					70					75
Arg	Leu	Val	Ala	Val	Glu	Glu	Asn	Val	Trp	Ile	Gln	Leu	Thr	Phe
				80					85					90
Asp	Glu	Arg	Phe	Gly	Leu	Glu	Asp	Pro	Glu	Asp	Asp	Ile	Cys	Lys
				95					100					105
Tyr	Asp	Phe	Val	Glu	Val	Glu	Glu	Pro	Ser	Asp	Gly	Thr	Ile	Leu
				110					115					120
Gly	Arg	Trp	Cys	Gly	Ser	Gly	Thr	Val	Pro	Gly	Lys	Gln	Ile	Ser
				125					130					135
Lys	Gly	Asn	Gln	Ile	Arg	Ile	Arg	Phe	Val	Ser	Asp	Glu	Tyr	Phe
				140					145					150
Pro	Ser	Glu	Pro	Gly	Phe	Cys	Ile	His	Tyr	Asn	Ile	Val	Met	Pro
				155					160					165

Gln Phe Thr Glu Ala Val Ser Pro Ser Val Leu Pro Pro Ser Ala	170	175	180
Leu Pro Leu Asp Leu Leu Asn Asn Ala Ile Thr Ala Phe Ser Thr	185	190	195
Leu Glu Asp Leu Ile Arg Tyr Leu Glu Pro Glu Arg Trp Gln Leu	200	205	210
Asp Leu Glu Asp Leu Tyr Arg Pro Thr Trp Gln Leu Leu Gly Lys	215	220	225
Ala Phe Val Phe Gly Arg Lys Ser Arg Val Val Asp Leu Asn Leu	230	235	240
Leu Thr Glu Glu Val Arg Leu Tyr Ser Cys Thr Pro Arg Asn Phe	245	250	255
Ser Val Ser Ile Arg Glu Glu Leu Lys Arg Thr Asp Thr Ile Phe	260	265	270
Trp Pro Gly Cys Leu Leu Val Lys Arg Cys Gly Gly Asn Cys Ala	275	280	285
Cys Cys Leu His Asn Cys Asn Glu Cys Gln Cys Val Pro Ser Lys	290	295	300
Val Thr Lys Lys Tyr His Glu Val Leu Gln Leu Arg Pro Lys Thr	305	310	315
Gly Val Arg Gly Leu His Lys Ser Leu Thr Asp Val Ala Leu Glu	320	325	330
His His Glu Glu Cys Asp Cys Val Cys Arg Gly Ser Thr Gly Gly	335	340	345

<210> 489

<211> 21

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 489

acttctcagt gtccataagg g 21

<210> 490

<211> 40

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 490

gaactaaaga gaaccgatac cattttctgg ccaggttgct 40

<210> 491

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 491

caccacagcg tttaaccagg 20

<210> 492

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 492

acaacaggca cagttccac 20

<210> 493

<211> 21

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 493

ggcggaatcc aacctgagta g 21

<210> 494

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 494

gcggctatcc tcctgtgctc 20

<210> 495

<211> 3283

<212> DNA

<213> Homo sapiens

<400> 495

cccatctcaa gctgatcttg gcacctctca tgctctgctc tttcaacca 50

gacctctaca ttccattttg gaagaagact aaaaatggtg tttccaatgt 100

ggacactgaa gagacaaatt cttatccttt ttaacataat cctaatttcc 150

aaactccttg gggctagatg gtttcctaaa actctgccct gtgatgtcac 200  
tctggatggt ccaaagaacc atgtgatcgt ggactgcaca gacaagcatt 250  
tgacagaaat tcctggaggt attccacga acaccacgaa cctcaccctc 300  
accattaacc acataccaga catctcccca gcgtcctttc acagactgga 350  
ccatctggta gagatcgatt tcagatgcaa ctgtgtacct attccactgg 400  
ggtaaaaaa caacatgtgc atcaagaggc tgcagattaa acccagaagc 450  
tttagtggac tcacttattt aaaatccctt tacctggatg gaaaccagct 500  
actagagata ccgcagggcc tccgcctag cttacagctt ctcagccttg 550  
aggccaacaa catcttttcc atcagaaaag agaactaac agaactggcc 600  
aacatagaaa tactctacct ggccaaaaac tgttattatc gaaatccttg 650  
ttatgtttca tattcaatag agaaagatgc cttcctaaac ttgacaaagt 700  
taaaagtgt ctcctgaaa gataacaatg tcacagccgt ccctactgtt 750  
ttgccatcta ctttaacaga actatatctc tacaacaaca tgattgcaa 800  
aatccaagaa gatgatttta ataacctcaa ccaattacaa attcttgacc 850  
taagtggaaa ttgccctcgt tgttataatg cccatttcc ttgtgcgccg 900  
tgtaaaaata attctcccct acagatccct gtaaatgctt ttgatgcgct 950  
gacagaatta aaagttttac gtctacacag taactctctt cagcatgtgc 1000  
ccccaagatg gtttaagaac atcaacaaac tccaggaact ggatctgtcc 1050  
caaaacttct tggccaaaga aattggggat gctaaatttc tgcattttct 1100  
ccccagcctc atccaattgg atctgtcttt caattttgaa cttcaggtct 1150  
atcgtgcac tatgaatcta tcacaagcat tttcttact gaaaagcctg 1200  
aaaattctgc ggatcagagg atatgtcttt aaagagttga aaagcttta 1250  
cctctcgcca ttacataatc ttcaaatct tgaagttctt gatcttgga 1300  
ctaactttat aaaaattgct aacctcagca tgtttaaaca atttaaaaga 1350  
ctgaaagtca tagatctttc agtgaataaa atatcacctt caggagattc 1400  
aagtgaagtt ggcttctgct caaatgccag aacttctgta gaaagttatg 1450  
aaccacaggt cctggaacaa ttacattatt tcagatatga taagtatgca 1500  
aggagttgca gattcaaaaa caaagaggct tctttcatgt ctgttaatga 1550

aagctgctac aagtatgggc agaccttgga tctaagtaaa aatagtatat 1600  
tttttgtcaa gtctctgat tttcagcatc tttctttcct caaatgcctg 1650  
aatctgtcag gaaatctcat tagccaaact cttaatggca gtgaattcca 1700  
acctttagca gagctgagat atttggactt ctccaacaac cggcttgatt 1750  
tactccattc aacagcattt gaagagcttc acaaactgga agttctggat 1800  
ataagcagta atagccatta ttttcaatca gaaggaatta ctcatatgct 1850  
aaactttacc aagaacctaa aggttctgca gaaactgatg atgaacgaca 1900  
atgacatctc ttcctccacc agcaggacca tggagagtga gtctcttaga 1950  
actctggaat tcagaggaaa tcacttagat gttttatgga gagaaggatga 2000  
taacagatac ttacaattat tcaagaatct gctaaaatta gaggaattag 2050  
acatctctaa aaattcccta agtttcttgc cttctggagt ttttgatggt 2100  
atgcctccaa atctaaagaa tctctctttg gccaaaaatg ggctcaaadc 2150  
tttcagttgg aagaaactcc agtgtctaaa gaacctggaa actttggacc 2200  
tcagccacaa ccaactgacc actgtccctg agagattatc caactgttcc 2250  
agaagcctca agaattctgat tcttaagaat aatcaaatac ggagtctgac 2300  
gaagtatttt ctacaagatg ccttccagtt gcgatatctg gatctcagct 2350  
caaataaaat ccagatgatc caaaagacca gcttcccaga aaatgtcctc 2400  
aacaatctga agatgttgct ttgcatcat aatcggtttc tgtgcacctg 2450  
tgatgctgtg tggtttgtct ggtgggttaa ccatacggag gtgactattc 2500  
cttacctggc cacagatgtg acttgtgtgg gccaggagc acacaagggc 2550  
caaagtgtga tctccctgga tctgtacacc tgtgagttag atctgactaa 2600  
cctgattctg ttctcacttt ccatatctgt atctctcttt ctcatggtga 2650  
tgatgacagc aagtcacctc tatttctggg atgtgtggta tatttaccat 2700  
ttctgtaagg ccaagataaa ggggtatcag cgtctaatac caccagactg 2750  
ttgctatgat gcttttattg tgtatgacac taaagacca gctgtgaccg 2800  
agtgggtttt ggctgagctg gtggccaaac tggaagacc aagagagaaa 2850  
cattttaatt tatgtctcga ggaaaggac tggttaccag ggcagccagt 2900  
tctggaaaac ctttcccaga gcatacagct tagcaaaaag acagtgtttg 2950  
tgatgacaga caagtatgca aagactgaaa attttaagat agcattttac 3000

ttgtcccatc agaggctcat ggatgaaaaa gttgatgtga ttatcttgat 3050  
 atttcttgag aagccctttc agaagtccaa gttcctccag ctccggaaaa 3100  
 ggctctgtgg gagttctgtc cttgagtggc caacaaaccc gcaagctcac 3150  
 ccatacttct ggcagtgtct aaagaacgcc ctggccacag acaatcatgt 3200  
 ggcctatagt cagggtgttca aggaaacggc ctagcccttc ttgcaaaac 3250  
 acaactgcct agtttaccaa ggagaggcct ggc 3283

<210> 496

<211> 1049

<212> PRT

<213> Homo sapiens

<400> 496

Met	Val	Phe	Pro	Met	Trp	Thr	Leu	Lys	Arg	Gln	Ile	Leu	Ile	Leu			
1				5					10						15		
Phe	Asn	Ile	Ile	Leu	Ile	Ser	Lys	Leu	Leu	Gly	Ala	Arg	Trp	Phe			
				20					25					30			
Pro	Lys	Thr	Leu	Pro	Cys	Asp	Val	Thr	Leu	Asp	Val	Pro	Lys	Asn			
				35					40					45			
His	Val	Ile	Val	Asp	Cys	Thr	Asp	Lys	His	Leu	Thr	Glu	Ile	Pro			
				50					55					60			
Gly	Gly	Ile	Pro	Thr	Asn	Thr	Thr	Asn	Leu	Thr	Leu	Thr	Ile	Asn			
				65					70					75			
His	Ile	Pro	Asp	Ile	Ser	Pro	Ala	Ser	Phe	His	Arg	Leu	Asp	His			
				80					85					90			
Leu	Val	Glu	Ile	Asp	Phe	Arg	Cys	Asn	Cys	Val	Pro	Ile	Pro	Leu			
				95					100					105			
Gly	Ser	Lys	Asn	Asn	Met	Cys	Ile	Lys	Arg	Leu	Gln	Ile	Lys	Pro			
				110					115					120			
Arg	Ser	Phe	Ser	Gly	Leu	Thr	Tyr	Leu	Lys	Ser	Leu	Tyr	Leu	Asp			
				125					130					135			
Gly	Asn	Gln	Leu	Leu	Glu	Ile	Pro	Gln	Gly	Leu	Pro	Pro	Ser	Leu			
				140					145					150			
Gln	Leu	Leu	Ser	Leu	Glu	Ala	Asn	Asn	Ile	Phe	Ser	Ile	Arg	Lys			
				155					160					165			
Glu	Asn	Leu	Thr	Glu	Leu	Ala	Asn	Ile	Glu	Ile	Leu	Tyr	Leu	Gly			
				170					175					180			
Gln	Asn	Cys	Tyr	Tyr	Arg	Asn	Pro	Cys	Tyr	Val	Ser	Tyr	Ser	Ile			
				185					190					195			

Glu Lys Asp Ala	Phe Leu Asn Leu Thr	Lys Leu Lys Val Leu Ser
200		205 210
Leu Lys Asp Asn	Asn Val Thr Ala Val	Pro Thr Val Leu Pro Ser
215		220 225
Thr Leu Thr Glu	Leu Tyr Leu Tyr Asn	Asn Met Ile Ala Lys Ile
230		235 240
Gln Glu Asp Asp	Phe Asn Asn Leu Asn	Gln Leu Gln Ile Leu Asp
245		250 255
Leu Ser Gly Asn	Cys Pro Arg Cys Tyr	Asn Ala Pro Phe Pro Cys
260		265 270
Ala Pro Cys Lys	Asn Asn Ser Pro Leu	Gln Ile Pro Val Asn Ala
275		280 285
Phe Asp Ala Leu	Thr Glu Leu Lys Val	Leu Arg Leu His Ser Asn
290		295 300
Ser Leu Gln His	Val Pro Pro Arg Trp	Phe Lys Asn Ile Asn Lys
305		310 315
Leu Gln Glu Leu	Asp Leu Ser Gln Asn	Phe Leu Ala Lys Glu Ile
320		325 330
Gly Asp Ala Lys	Phe Leu His Phe Leu	Pro Ser Leu Ile Gln Leu
335		340 345
Asp Leu Ser Phe	Asn Phe Glu Leu Gln	Val Tyr Arg Ala Ser Met
350		355 360
Asn Leu Ser Gln	Ala Phe Ser Ser Leu	Lys Ser Leu Lys Ile Leu
365		370 375
Arg Ile Arg Gly	Tyr Val Phe Lys Glu	Leu Lys Ser Phe Asn Leu
380		385 390
Ser Pro Leu His	Asn Leu Gln Asn Leu	Glu Val Leu Asp Leu Gly
395		400 405
Thr Asn Phe Ile	Lys Ile Ala Asn Leu	Ser Met Phe Lys Gln Phe
410		415 420
Lys Arg Leu Lys	Val Ile Asp Leu Ser	Val Asn Lys Ile Ser Pro
425		430 435
Ser Gly Asp Ser	Ser Glu Val Gly Phe	Cys Ser Asn Ala Arg Thr
440		445 450
Ser Val Glu Ser	Tyr Glu Pro Gln Val	Leu Glu Gln Leu His Tyr
455		460 465
Phe Arg Tyr Asp	Lys Tyr Ala Arg Ser	Cys Arg Phe Lys Asn Lys
470		475 480

Glu Ala Ser Phe Met Ser Val Asn Glu Ser Cys Tyr Lys Tyr Gly	485	490	495
Gln Thr Leu Asp Leu Ser Lys Asn Ser Ile Phe Phe Val Lys Ser	500	505	510
Ser Asp Phe Gln His Leu Ser Phe Leu Lys Cys Leu Asn Leu Ser	515	520	525
Gly Asn Leu Ile Ser Gln Thr Leu Asn Gly Ser Glu Phe Gln Pro	530	535	540
Leu Ala Glu Leu Arg Tyr Leu Asp Phe Ser Asn Asn Arg Leu Asp	545	550	555
Leu Leu His Ser Thr Ala Phe Glu Glu Leu His Lys Leu Glu Val	560	565	570
Leu Asp Ile Ser Ser Asn Ser His Tyr Phe Gln Ser Glu Gly Ile	575	580	585
Thr His Met Leu Asn Phe Thr Lys Asn Leu Lys Val Leu Gln Lys	590	595	600
Leu Met Met Asn Asp Asn Asp Ile Ser Ser Ser Thr Ser Arg Thr	605	610	615
Met Glu Ser Glu Ser Leu Arg Thr Leu Glu Phe Arg Gly Asn His	620	625	630
Leu Asp Val Leu Trp Arg Glu Gly Asp Asn Arg Tyr Leu Gln Leu	635	640	645
Phe Lys Asn Leu Leu Lys Leu Glu Glu Leu Asp Ile Ser Lys Asn	650	655	660
Ser Leu Ser Phe Leu Pro Ser Gly Val Phe Asp Gly Met Pro Pro	665	670	675
Asn Leu Lys Asn Leu Ser Leu Ala Lys Asn Gly Leu Lys Ser Phe	680	685	690
Ser Trp Lys Lys Leu Gln Cys Leu Lys Asn Leu Glu Thr Leu Asp	695	700	705
Leu Ser His Asn Gln Leu Thr Thr Val Pro Glu Arg Leu Ser Asn	710	715	720
Cys Ser Arg Ser Leu Lys Asn Leu Ile Leu Lys Asn Asn Gln Ile	725	730	735
Arg Ser Leu Thr Lys Tyr Phe Leu Gln Asp Ala Phe Gln Leu Arg	740	745	750
Tyr Leu Asp Leu Ser Ser Asn Lys Ile Gln Met Ile Gln Lys Thr	755	760	765



Ser Phe Pro Glu Asn Val Leu Asn Asn Leu Lys Met Leu Leu Leu	770	775	780
His His Asn Arg Phe Leu Cys Thr Cys Asp Ala Val Trp Phe Val	785	790	795
Trp Trp Val Asn His Thr Glu Val Thr Ile Pro Tyr Leu Ala Thr	800	805	810
Asp Val Thr Cys Val Gly Pro Gly Ala His Lys Gly Gln Ser Val	815	820	825
Ile Ser Leu Asp Leu Tyr Thr Cys Glu Leu Asp Leu Thr Asn Leu	830	835	840
Ile Leu Phe Ser Leu Ser Ile Ser Val Ser Leu Phe Leu Met Val	845	850	855
Met Met Thr Ala Ser His Leu Tyr Phe Trp Asp Val Trp Tyr Ile	860	865	870
Tyr His Phe Cys Lys Ala Lys Ile Lys Gly Tyr Gln Arg Leu Ile	875	880	885
Ser Pro Asp Cys Cys Tyr Asp Ala Phe Ile Val Tyr Asp Thr Lys	890	895	900
Asp Pro Ala Val Thr Glu Trp Val Leu Ala Glu Leu Val Ala Lys	905	910	915
Leu Glu Asp Pro Arg Glu Lys His Phe Asn Leu Cys Leu Glu Glu	920	925	930
Arg Asp Trp Leu Pro Gly Gln Pro Val Leu Glu Asn Leu Ser Gln	935	940	945
Ser Ile Gln Leu Ser Lys Lys Thr Val Phe Val Met Thr Asp Lys	950	955	960
Tyr Ala Lys Thr Glu Asn Phe Lys Ile Ala Phe Tyr Leu Ser His	965	970	975
Gln Arg Leu Met Asp Glu Lys Val Asp Val Ile Ile Leu Ile Phe	980	985	990
Leu Glu Lys Pro Phe Gln Lys Ser Lys Phe Leu Gln Leu Arg Lys	995	1000	1005
Arg Leu Cys Gly Ser Ser Val Leu Glu Trp Pro Thr Asn Pro Gln	1010	1015	1020
Ala His Pro Tyr Phe Trp Gln Cys Leu Lys Asn Ala Leu Ala Thr	1025	1030	1035
Asp Asn His Val Ala Tyr Ser Gln Val Phe Lys Glu Thr Val	1040	1045	

<210> 497  
<211> 4199  
<212> DNA  
<213> Homo sapiens

<400> 497  
gggtaccatt ctgctgtgct gcaagttacg gaatgaaaaa ttagaacaac 50  
agaaacatgg aaaacatgtt ccttcagtcg tcaatgctga cctgcatttt 100  
cctgctaata tctggttcct gtgagttatg cgccgaagaa aatttttcta 150  
gaagctatcc ttgtgatgag aaaaagcaaa atgactcagt tattgcagag 200  
tgcagcaatc gtcgactaca ggaagttccc caaacgggtgg gcaaatatgt 250  
gacagaacta gacctgtctg ataatttcat cacacacata acgaatgaat 300  
catttcaagg gctgcaaaat ctactaaaa taaatctaaa ccacaacccc 350  
aatgtacagc accagaacgg aaatcccgg atacaatcaa atggcttgaa 400  
tatcacagac ggggcattcc tcaacctaaa aaacctaagg gagttactgc 450  
ttgaagacaa ccagttaccc caaataccct ctggtttgcc agagtctttg 500  
acagaactta gtctaattca aaacaatata tacaacataa ctaaagaggg 550  
catttcaaga cttataaact tgaaaaatct ctatttggcc tggaactgct 600  
attttaacaa agtttgcgag aaaactaaca tagaagatgg agtatttgaa 650  
acgtgacaa atttgaggtt gctatcacta tctttcaatt ctctttcaca 700  
cgtgccaccc aaactgcaa gctccctacg caaacttttt ctgagcaaca 750  
cccagatcaa atacattagt gaagaagatt tcaagggtt gataaattta 800  
acattactag atttaagcgg gaactgtccg aggtgcttca atgccccatt 850  
tccatgcgtg ccttgatgat gtggtgcttc aattaatata gatcgttttg 900  
cttttcaaaa cttgacccaa cttcgatacc taaacctctc tagcacttcc 950  
ctcaggaaga ttaatgctgc ctggtttaaa aatatgcctc atctgaaggt 1000  
gctggatctt gaattcaact atttagtggg agaaatagtc tctggggcat 1050  
ttttaacgat gctgccccgc ttagaaatac ttgacttgtc ttttaactat 1100  
ataaagggga gttatccaca gcatattaat atttccagaa acttctctaa 1150  
acttttgtct ctacgggcat tgcatttaag aggttatgtg ttccaggaac 1200  
tcagagaaga tgatttccag cccctgatgc agcttccaaa cttatcgact 1250

atcaacttgg gtattaattht tattaagcaa atcgatttca aacttttcca 1300  
aaattttctcc aatctggaaa ttattttactt gtcagaaaaac agaatatcac 1350  
cgttggtaaa agatacccggt cagagttatg caaatagttc ctcttttcaa 1400  
cgtcatatcc ggaaacgacg ctcaacagat tttgagtttg acccacattc 1450  
gaactttttat catttcaccc gtccttttaat aaagccacaa tgtgctgctt 1500  
atggaaaagc cttagattta agcctcaaca gtattttctt cattgggcca 1550  
aaccaatttg aaaatcttcc tgacattgcc tgtttaaatc tgtctgcaa 1600  
tagcaatgct caagtgttaa gtggaactga attttcagcc attcctcatg 1650  
tcaaataattht ggatttgaca aacaatagac tagactttga taatgctagt 1700  
gctcttactg aattgtccga cttggaagtt ctagatctca gctataattc 1750  
acactatttc agaatagcag gcgtaacaca tcatctagaa tttattcaaa 1800  
atttcacaaa tctaaaagtt ttaaacttga gccacaacaa catttatact 1850  
ttaacagata agtataacct ggaaagcaag tccctggtag aattagtttt 1900  
cagtggaat cgccttgaca ttttgtggaa tgatgatgac aacaggtata 1950  
tctccatttht caaaggctc aagaatctga cacgtctgga tttatccctt 2000  
aataggctga agcacatccc aaatgaagca ttccttaatt tgccagcgag 2050  
tctcactgaa ctacataata atgataatat gttaaagttt tttaactgga 2100  
cattactcca gcagtttctt cgtctcgagt tgettgaactt acgtggaaac 2150  
aaactactct ttttaactga tagcctatct gactttacat cttcccttcg 2200  
gacactgctg ctgagtcata acaggatttc ccacctaccc tctggctttc 2250  
tttctgaagt cagtagtctg aagcacctcg atttaagttc caatctgcta 2300  
aaaacaatca acaaatccgc acttgaaact aagaccacca ccaaattatc 2350  
tatgttggaa ctacacggaa acccctttga atgcacctgt gacattggag 2400  
atttccgaag atggatggat gaacatctga atgtcaaaat tcccagactg 2450  
gtagatgtca tttgtgccag tcctggggat caaagaggga agagtattgt 2500  
gagtctggag ctaacaactt gtgtttcaga tgtcactgca gtgatattat 2550  
ttttcttcac gttctttatc accaccatgg ttatgttggc tgccctggct 2600  
caccatttgt tttactggga tgtttgggtt atatataatg tgtgttttagc 2650  
taaggtaaaa ggctacaggt ctctttccac atcccaaact ttctatgatg 2700

cttacatttc ttatgacacc aaagatgcct ctgttactga ctgggtgata 2750  
aatgagctgc gctaccacct tgaagagagc cgagacaaaa acgttctcct 2800  
ttgtctagag gagagggatt gggacccggg attggccatc atcgacaacc 2850  
tcatgcagag catcaaccaa agcaagaaaa cagtatttgt tttaaccaa 2900  
aaatatgcaa aaagctggaa ctttaaaaca gctttttact tggctttgca 2950  
gaggctaata gatgagaaca tggatgtgat tatatttata ctgctggagc 3000  
cagtgttaca gcattctcag ttttgaggc tacggcagcg gatctgtaag 3050  
agctccatcc tccagtggcc tgacaacccg aaggcagaag gcttgttttg 3100  
gcaaactctg agaaatgtgg tcttgactga aaatgattca cgtataaca 3150  
atatgtatgt cgattccatt aagcaatact aactgacgtt aagtcatgat 3200  
ttcgcgccat aataaagatg caaaggaatg acatttctgt attagttatc 3250  
tattgctatg taacaaatta tccaaaact tagtggttta aaacaacaca 3300  
tttgctggcc cacagttttt gagggtcagg agtccaggcc cagcataact 3350  
gggtcctctg ctgagggtgt ctgagaggct gcaatgtagg tggtcaccag 3400  
agacataggg atcactgggg tcacactcat gtggttggtt tctggattca 3450  
attcctcctg ggctattggc caaaggctat actcatgtaa gccatgcgag 3500  
cctctccac aaggcagctt gcttcacag agctagcaaa aaagagaggt 3550  
tgctagcaag atgaagtcac aatcttttgt aatcgaatca aaaaagtgat 3600  
atctcatcac tttggccata ttctatttgt tagaagtaaa ccacaggtcc 3650  
caccagctcc atgggagtga ccacctcagt ccagggaata cagctgaaga 3700  
ccaagatggg gagctctgat tgcttcagtt ggtcatcaac tattttccct 3750  
tgactgctgt cctgggatgg cctgctatct tgatgataga ttgtgaatat 3800  
caggaggcag ggatcactgt ggaccatctt agcagttgac ctaacacatc 3850  
ttcttttcaa tatctaagaa cttttgccac tgtgactaat ggtcctaata 3900  
ttaagctgtt gtttatatct atcatatatc tatggctaca tggttatatt 3950  
atgctgtggg tgcgttcggt tttatttaca gttgctttta caaatatttg 4000  
ctgtaacatt tgacttctaa ggttttagatg ccatttaaga actgagatgg 4050  
atagctttta aagcatcttt tacttcttac ctttttttaa aagtatgcag 4100

ctaaattcga agcttttgggt ctatattggtt aattgccatt gctgtaaatc 4150

ttaaaatgaa tgaataaaaa tgtttcattt tacaaaaaaa aaaaaaaaa 4199

<210> 498

<211> 1041

<212> PRT

<213> Homo sapiens

<400> 498

Met	Glu	Asn	Met	Phe	Leu	Gln	Ser	Ser	Met	Leu	Thr	Cys	Ile	Phe
1				5					10					15

Leu	Leu	Ile	Ser	Gly	Ser	Cys	Glu	Leu	Cys	Ala	Glu	Glu	Asn	Phe
				20					25					30

Ser	Arg	Ser	Tyr	Pro	Cys	Asp	Glu	Lys	Lys	Gln	Asn	Asp	Ser	Val
				35					40					45

Ile	Ala	Glu	Cys	Ser	Asn	Arg	Arg	Leu	Gln	Glu	Val	Pro	Gln	Thr
				50					55					60

Val	Gly	Lys	Tyr	Val	Thr	Glu	Leu	Asp	Leu	Ser	Asp	Asn	Phe	Ile
				65					70					75

Thr	His	Ile	Thr	Asn	Glu	Ser	Phe	Gln	Gly	Leu	Gln	Asn	Leu	Thr
				80					85					90

Lys	Ile	Asn	Leu	Asn	His	Asn	Pro	Asn	Val	Gln	His	Gln	Asn	Gly
				95					100					105

Asn	Pro	Gly	Ile	Gln	Ser	Asn	Gly	Leu	Asn	Ile	Thr	Asp	Gly	Ala
				110					115					120

Phe	Leu	Asn	Leu	Lys	Asn	Leu	Arg	Glu	Leu	Leu	Leu	Glu	Asp	Asn
				125					130					135

Gln	Leu	Pro	Gln	Ile	Pro	Ser	Gly	Leu	Pro	Glu	Ser	Leu	Thr	Glu
				140					145					150

Leu	Ser	Leu	Ile	Gln	Asn	Asn	Ile	Tyr	Asn	Ile	Thr	Lys	Glu	Gly
				155					160					165

Ile	Ser	Arg	Leu	Ile	Asn	Leu	Lys	Asn	Leu	Tyr	Leu	Ala	Trp	Asn
				170					175					180

Cys	Tyr	Phe	Asn	Lys	Val	Cys	Glu	Lys	Thr	Asn	Ile	Glu	Asp	Gly
				185					190					195

Val	Phe	Glu	Thr	Leu	Thr	Asn	Leu	Glu	Leu	Leu	Ser	Leu	Ser	Phe
				200					205					210

Asn	Ser	Leu	Ser	His	Val	Pro	Pro	Lys	Leu	Pro	Ser	Ser	Leu	Arg
				215					220					225

Lys	Leu	Phe	Leu	Ser	Asn	Thr	Gln	Ile	Lys	Tyr	Ile	Ser	Glu	Glu
				230					235					240

Asp Phe Lys Gly	Leu Ile Asn Leu Thr	Leu Leu Asp Leu Ser Gly
245		250 255
Asn Cys Pro Arg	Cys Phe Asn Ala Pro	Phe Pro Cys Val Pro Cys
260		265 270
Asp Gly Gly Ala	Ser Ile Asn Ile Asp	Arg Phe Ala Phe Gln Asn
275		280 285
Leu Thr Gln Leu	Arg Tyr Leu Asn Leu	Ser Ser Thr Ser Leu Arg
290		295 300
Lys Ile Asn Ala	Ala Trp Phe Lys Asn	Met Pro His Leu Lys Val
305		310 315
Leu Asp Leu Glu	Phe Asn Tyr Leu Val	Gly Glu Ile Val Ser Gly
320		325 330
Ala Phe Leu Thr	Met Leu Pro Arg Leu	Glu Ile Leu Asp Leu Ser
335		340 345
Phe Asn Tyr Ile	Lys Gly Ser Tyr Pro	Gln His Ile Asn Ile Ser
350		355 360
Arg Asn Phe Ser	Lys Leu Leu Ser Leu	Arg Ala Leu His Leu Arg
365		370 375
Gly Tyr Val Phe	Gln Glu Leu Arg Glu	Asp Asp Phe Gln Pro Leu
380		385 390
Met Gln Leu Pro	Asn Leu Ser Thr Ile	Asn Leu Gly Ile Asn Phe
395		400 405
Ile Lys Gln Ile	Asp Phe Lys Leu Phe	Gln Asn Phe Ser Asn Leu
410		415 420
Glu Ile Ile Tyr	Leu Ser Glu Asn Arg	Ile Ser Pro Leu Val Lys
425		430 435
Asp Thr Arg Gln	Ser Tyr Ala Asn Ser	Ser Ser Phe Gln Arg His
440		445 450
Ile Arg Lys Arg	Arg Ser Thr Asp Phe	Glu Phe Asp Pro His Ser
455		460 465
Asn Phe Tyr His	Phe Thr Arg Pro Leu	Ile Lys Pro Gln Cys Ala
470		475 480
Ala Tyr Gly Lys	Ala Leu Asp Leu Ser	Leu Asn Ser Ile Phe Phe
485		490 495
Ile Gly Pro Asn	Gln Phe Glu Asn Leu	Pro Asp Ile Ala Cys Leu
500		505 510
Asn Leu Ser Ala	Asn Ser Asn Ala Gln	Val Leu Ser Gly Thr Glu
515		520 525

Phe Ser Ala Ile	Pro His Val Lys Tyr	Leu Asp Leu Thr Asn Asn	530	535	540
Arg Leu Asp Phe	Asp Asn Ala Ser Ala	Leu Thr Glu Leu Ser Asp	545	550	555
Leu Glu Val Leu	Asp Leu Ser Tyr Asn	Ser His Tyr Phe Arg Ile	560	565	570
Ala Gly Val Thr	His His Leu Glu Phe	Ile Gln Asn Phe Thr Asn	575	580	585
Leu Lys Val Leu	Asn Leu Ser His Asn	Asn Ile Tyr Thr Leu Thr	590	595	600
Asp Lys Tyr Asn	Leu Glu Ser Lys Ser	Leu Val Glu Leu Val Phe	605	610	615
Ser Gly Asn Arg	Leu Asp Ile Leu Trp	Asn Asp Asp Asp Asn Arg	620	625	630
Tyr Ile Ser Ile	Phe Lys Gly Leu Lys	Asn Leu Thr Arg Leu Asp	635	640	645
Leu Ser Leu Asn	Arg Leu Lys His Ile	Pro Asn Glu Ala Phe Leu	650	655	660
Asn Leu Pro Ala	Ser Leu Thr Glu Leu	His Ile Asn Asp Asn Met	665	670	675
Leu Lys Phe Phe	Asn Trp Thr Leu Leu	Gln Gln Phe Pro Arg Leu	680	685	690
Glu Leu Leu Asp	Leu Arg Gly Asn Lys	Leu Leu Phe Leu Thr Asp	695	700	705
Ser Leu Ser Asp	Phe Thr Ser Ser Leu	Arg Thr Leu Leu Leu Ser	710	715	720
His Asn Arg Ile	Ser His Leu Pro Ser	Gly Phe Leu Ser Glu Val	725	730	735
Ser Ser Leu Lys	His Leu Asp Leu Ser	Ser Asn Leu Leu Lys Thr	740	745	750
Ile Asn Lys Ser	Ala Leu Glu Thr Lys	Thr Thr Thr Lys Leu Ser	755	760	765
Met Leu Glu Leu	His Gly Asn Pro Phe	Glu Cys Thr Cys Asp Ile	770	775	780
Gly Asp Phe Arg	Arg Trp Met Asp Glu	His Leu Asn Val Lys Ile	785	790	795
Pro Arg Leu Val	Asp Val Ile Cys Ala	Ser Pro Gly Asp Gln Arg	800	805	810

Gly	Lys	Ser	Ile	Val	Ser	Leu	Glu	Leu	Thr	Thr	Cys	Val	Ser	Asp	815	820	825
Val	Thr	Ala	Val	Ile	Leu	Phe	Phe	Phe	Thr	Phe	Phe	Ile	Thr	Thr	830	835	840
Met	Val	Met	Leu	Ala	Ala	Leu	Ala	His	His	Leu	Phe	Tyr	Trp	Asp	845	850	855
Val	Trp	Phe	Ile	Tyr	Asn	Val	Cys	Leu	Ala	Lys	Val	Lys	Gly	Tyr	860	865	870
Arg	Ser	Leu	Ser	Thr	Ser	Gln	Thr	Phe	Tyr	Asp	Ala	Tyr	Ile	Ser	875	880	885
Tyr	Asp	Thr	Lys	Asp	Ala	Ser	Val	Thr	Asp	Trp	Val	Ile	Asn	Glu	890	895	900
Leu	Arg	Tyr	His	Leu	Glu	Glu	Ser	Arg	Asp	Lys	Asn	Val	Leu	Leu	905	910	915
Cys	Leu	Glu	Glu	Arg	Asp	Trp	Asp	Pro	Gly	Leu	Ala	Ile	Ile	Asp	920	925	930
Asn	Leu	Met	Gln	Ser	Ile	Asn	Gln	Ser	Lys	Lys	Thr	Val	Phe	Val	935	940	945
Leu	Thr	Lys	Lys	Tyr	Ala	Lys	Ser	Trp	Asn	Phe	Lys	Thr	Ala	Phe	950	955	960
Tyr	Leu	Ala	Leu	Gln	Arg	Leu	Met	Asp	Glu	Asn	Met	Asp	Val	Ile	965	970	975
Ile	Phe	Ile	Leu	Leu	Glu	Pro	Val	Leu	Gln	His	Ser	Gln	Tyr	Leu	980	985	990
Arg	Leu	Arg	Gln	Arg	Ile	Cys	Lys	Ser	Ser	Ile	Leu	Gln	Trp	Pro	995	1000	1005
Asp	Asn	Pro	Lys	Ala	Glu	Gly	Leu	Phe	Trp	Gln	Thr	Leu	Arg	Asn	1010	1015	1020
Val	Val	Leu	Thr	Glu	Asn	Asp	Ser	Arg	Tyr	Asn	Asn	Met	Tyr	Val	1025	1030	1035
Asp	Ser	Ile	Lys	Gln	Tyr										1040		

<210> 499

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe



<400> 499  
taaagaccca gctgtgaccg 20

<210> 500  
<211> 20  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 500  
atccatgagc ctctgatggg 20

<210> 501  
<211> 45  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 501  
atttatgtct cgaggaaagg gactgggttac cagggcagcc agttc 45

<210> 502  
<211> 21  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 502  
gccgagacaa aaacgttctc c 21

<210> 503  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 503  
catccatggt ctcatccatt agcc 24

<210> 504  
<211> 46  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 504  
tcgacaacct catgcagagc atcaacacaaa gcaagaaaac agtatt 46

<210> 505  
<211> 1738  
<212> DNA  
<213> Homo sapiens

<400> 505

ccaggtccaa ctgcacctcg gttctatcga ttgaattccc cggggatcct 50  
ctagagatcc ctgcacctcg acccacgcgt ccgccaagct ggccctgcac 100  
ggctgcaagg gaggtcctcg tggacaggcc aggcaggtgg gcctcaggag 150  
gtgcctccag gcggccagtg ggctgaggc cccagcaagg gctagggtc 200  
atctccagtc ccaggacaca gcagcggcca ccatggccac gcctgggctc 250  
cagcagcatc agcagcccc aggaccggg aggcacaggt ggccccacc 300  
accgggagga gcagctcctg cccctgtccg ggggatgact gattctcctc 350  
cgccaggcca cccagaggag aaggccaccc cgcctggagg cacaggccat 400  
gaggggctct caggaggtgc tgctgatgtg gcttctggtg ttggcagtgg 450  
gcggcacaga gcacgcctac cggcccggcc gtaggggtgtg tgctgtccgg 500  
gctcacgggg accctgtctc cgagtcgttc gtgcagcgtg tgtaccagcc 550  
cttctcacc acctgcgacg ggcaccgggc ctgcagcacc taccgaacca 600  
tctataggac cgcctaccgc cgcagccctg ggctggcccc tgccaggcct 650  
cgctacgcgt gctgccccgg ctggaagagg accagcgggc ttctggggc 700  
ctgtggagca gcaatatgcc agccgccatg ccggaacgga gggagctgtg 750  
tccagcctgg ccgctgccgc tgccctgcag gatggcgggg tgacacttgc 800  
cagtcagatg tggatgaatg cagtgcctagg aggggcggct gtcccagcg 850  
ctgcatcaac accgcccggc gttactggtg ccagtgttg gaggggcaca 900  
gcctgtctgc agacggtaca ctctgtgtgc ccaagggagg gccccccagg 950  
gtggccccca acccgacagg agtggacagt gcaatgaagg aagaagtgc 1000  
gaggctgcag tccaggggtg acctgctgga ggagaagctg cagctggtgc 1050  
tggccccact gcacagcctg gcctcgcagg cactggagca tgggctccc 1100  
gaccccgga gcctcctggt gactccttc cagcagctcg gccgcatcga 1150  
ctccctgagc gagcagattt ccttctgga ggagcagctg gggctcctgt 1200  
cctgcaagaa agactcgtga ctgcccagcg cccaggtg gactgagccc 1250

ctacagccgc cctgcagccc ccatgccct gcccaacatg ctgggggtcc 1300  
 agaagccacc tcggggtgac tgagcggaag gccaggcagg gccttcctcc 1350  
 tcttcctcct ccccttcctc gggaggctcc ccagaccctg gcatgggatg 1400  
 ggctgggatc ttctctgtga atccaccctt ggctaccccc accctggcta 1450  
 ccccaacggc atcccaaggc cagggtgggcc ctgagctgag ggaaggtacg 1500  
 agctccctgc tggagcctgg gacccatggc acaggccagg cagcccggag 1550  
 gctgggtggg gcctcagtgg gggctgctgc ctgaccccca gcacaataaa 1600  
 aatgaaacgt gaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 1650  
 aaagggcggc cgcgactcta gagtcgacct gcagaagctt ggccgccatg 1700  
 gcccaacttg tttattgcag cttataatgg ttacaaat 1738

<210> 506  
 <211> 273  
 <212> PRT  
 <213> Homo sapiens

<400> 506

Met	Arg	Gly	Ser	Gln	Glu	Val	Leu	Leu	Met	Trp	Leu	Leu	Val	Leu	1	5	10	15
Ala	Val	Gly	Gly	Thr	Glu	His	Ala	Tyr	Arg	Pro	Gly	Arg	Arg	Val	20	25	30	
Cys	Ala	Val	Arg	Ala	His	Gly	Asp	Pro	Val	Ser	Glu	Ser	Phe	Val	35	40	45	
Gln	Arg	Val	Tyr	Gln	Pro	Phe	Leu	Thr	Thr	Cys	Asp	Gly	His	Arg	50	55	60	
Ala	Cys	Ser	Thr	Tyr	Arg	Thr	Ile	Tyr	Arg	Thr	Ala	Tyr	Arg	Arg	65	70	75	
Ser	Pro	Gly	Leu	Ala	Pro	Ala	Arg	Pro	Arg	Tyr	Ala	Cys	Cys	Pro	80	85	90	
Gly	Trp	Lys	Arg	Thr	Ser	Gly	Leu	Pro	Gly	Ala	Cys	Gly	Ala	Ala	95	100	105	
Ile	Cys	Gln	Pro	Pro	Cys	Arg	Asn	Gly	Gly	Ser	Cys	Val	Gln	Pro	110	115	120	
Gly	Arg	Cys	Arg	Cys	Pro	Ala	Gly	Trp	Arg	Gly	Asp	Thr	Cys	Gln	125	130	135	
Ser	Asp	Val	Asp	Glu	Cys	Ser	Ala	Arg	Arg	Gly	Gly	Cys	Pro	Gln	140	145	150	
Arg	Cys	Ile	Asn	Thr	Ala	Gly	Ser	Tyr	Trp	Cys	Gln	Cys	Trp	Glu				

	155		160		165
Gly His Ser Leu Ser Ala Asp Gly Thr Leu Cys Val Pro Lys Gly	170		175		180
Gly Pro Pro Arg Val Ala Pro Asn Pro Thr Gly Val Asp Ser Ala	185		190		195
Met Lys Glu Glu Val Gln Arg Leu Gln Ser Arg Val Asp Leu Leu	200		205		210
Glu Glu Lys Leu Gln Leu Val Leu Ala Pro Leu His Ser Leu Ala	215		220		225
Ser Gln Ala Leu Glu His Gly Leu Pro Asp Pro Gly Ser Leu Leu	230		235		240
Val His Ser Phe Gln Gln Leu Gly Arg Ile Asp Ser Leu Ser Glu	245		250		255
Gln Ile Ser Phe Leu Glu Glu Gln Leu Gly Ser Cys Ser Cys Lys	260		265		270

Lys Asp Ser

<210> 507  
 <211> 1700  
 <212> DNA  
 <213> Homo sapiens

<400> 507  
 gccaggcagg tgggcctcag gaggtgcctc caggcggcca gtgggcctga 50  
 ggccccagca agggtaggg tccatctcca gtcccaggac acagcagcgg 100  
 ccaccatggc cacgcctggg ctccagcagc atcagagcag cccctgtggt 150  
 tggcagcaaa gttcagcttg gctgggcccg ctgtgagggg cttcgcgcta 200  
 cgccctgcgg tgtcccgagg gctgaggtct cctcatcttc tccctagcag 250  
 tggatgagca acccaacggg ggcccgggga ggggaactgg ccccgaggga 300  
 gaggaacccc aaagccacat ctgtagccag gatgagcagt gtgaatccag 350  
 gcagccccca ggaccgggga ggcacagggtg gccccacca cccggaggag 400  
 cagctcctgc ccctgtccgg gggatgactg attctctctc gccaggccac 450  
 ccagaggaga aggccacccc gcctggaggc acaggccatg aggggctctc 500  
 aggaggtgct gctgatgtgg cttctggtgt tggcagtggg cggcacagag 550  
 cagcctacc ggcccgggcg tagggtgtgt gctgtccggg ctacagggga 600  
 ccctgtctcc gagtcttctg tgcagcgtgt gtaccagccc ttctcacca 650

cctgcgacgg gcaccggggc tgcagcacct accgaaccat ctataggacc 700  
 gcctaccgcc gcagccctgg gctggccct gccaggcctc gctacgcgtg 750  
 ctgccccggc tggaagagga ccagcgggct tcctggggcc tgtggagcag 800  
 caatatgcca gccgccatgc cggaacggag ggagctgtgt ccagcctggc 850  
 cgctgccgct gccctgcagg atggcggggt gacacttgcc agtcagatgt 900  
 ggatgaatgc agtgctagga ggggcggctg tccccagcgc tgcataca 950  
 ccgccggcag ttactggtgc cagtgttggg aggggcacag cctgtctgca 1000  
 gagggtacac tctgtgtgcc caaggagggg cccccaggg tggccccaa 1050  
 cccgacagga gtggacagtg caatgaagga agaagtgcag aggctgcagt 1100  
 ccagggtgga cctgctggag gagaagctgc agctggtgct ggccccactg 1150  
 cacagcctgg cctcgcaggc actggagcat gggctcccgg accccggcag 1200  
 cctcctggtg cactccttcc agcagctcgg ccgcatcgac tccctgagcg 1250  
 agcagatttc cttcctggag gagcagctgg ggtcctgctc ctgcaagaaa 1300  
 gactcgtgac tgcccagcgc tccaggettg actgagcccc tcacgccgcc 1350  
 ctgcagcccc catgcccctg cccaacatgc tgggggtcca gaagccacct 1400  
 cggggtgact gagcggaagg ccaggcaggg cttcctcct cttcctcctc 1450  
 ccttcctcgt ggaggctccc cagaccctgg catgggatgg gctgggatct 1500  
 tctctgtgaa tccaccctg gctaccccca ccctggctac cccaacggca 1550  
 tcccaaggcc aggtggaccc tcagctgagg gaaggtacga gctccctgct 1600  
 ggagcctggg acccatggca caggccaggc agcccgagg ctgggtgggg 1650  
 cctcagtggg ggctgctgcc tgacccccag cacaataaaa atgaaacgtg 1700

<210> 508

<211> 273

<212> PRT

<213> Homo sapiens

<400> 508

Met	Arg	Gly	Ser	Gln	Glu	Val	Leu	Leu	Met	Trp	Leu	Leu	Val	Leu
1				5					10					15

Ala	Val	Gly	Gly	Thr	Glu	His	Ala	Tyr	Arg	Pro	Gly	Arg	Arg	Val
				20					25					30

Cys	Ala	Val	Arg	Ala	His	Gly	Asp	Pro	Val	Ser	Glu	Ser	Phe	Val
				35					40					45

Gln	Arg	Val	Tyr	Gln	Pro	Phe	Leu	Thr	Thr	Cys	Asp	Gly	His	Arg	
				50					55					60	
Ala	Cys	Ser	Thr	Tyr	Arg	Thr	Ile	Tyr	Arg	Thr	Ala	Tyr	Arg	Arg	
				65					70					75	
Ser	Pro	Gly	Leu	Ala	Pro	Ala	Arg	Pro	Arg	Tyr	Ala	Cys	Cys	Pro	
				80					85					90	
Gly	Trp	Lys	Arg	Thr	Ser	Gly	Leu	Pro	Gly	Ala	Cys	Gly	Ala	Ala	
				95					100					105	
Ile	Cys	Gln	Pro	Pro	Cys	Arg	Asn	Gly	Gly	Ser	Cys	Val	Gln	Pro	
				110					115					120	
Gly	Arg	Cys	Arg	Cys	Pro	Ala	Gly	Trp	Arg	Gly	Asp	Thr	Cys	Gln	
				125					130					135	
Ser	Asp	Val	Asp	Glu	Cys	Ser	Ala	Arg	Arg	Gly	Gly	Cys	Pro	Gln	
				140					145					150	
Arg	Cys	Ile	Asn	Thr	Ala	Gly	Ser	Tyr	Trp	Cys	Gln	Cys	Trp	Glu	
				155					160					165	
Gly	His	Ser	Leu	Ser	Ala	Asp	Gly	Thr	Leu	Cys	Val	Pro	Lys	Gly	
				170					175					180	
Gly	Pro	Pro	Arg	Val	Ala	Pro	Asn	Pro	Thr	Gly	Val	Asp	Ser	Ala	
				185					190					195	
Met	Lys	Glu	Glu	Val	Gln	Arg	Leu	Gln	Ser	Arg	Val	Asp	Leu	Leu	
				200					205					210	
Glu	Glu	Lys	Leu	Gln	Leu	Val	Leu	Ala	Pro	Leu	His	Ser	Leu	Ala	
				215					220					225	
Ser	Gln	Ala	Leu	Glu	His	Gly	Leu	Pro	Asp	Pro	Gly	Ser	Leu	Leu	
				230					235					240	
Val	His	Ser	Phe	Gln	Gln	Leu	Gly	Arg	Ile	Asp	Ser	Leu	Ser	Glu	
				245					250					255	
Gln	Ile	Ser	Phe	Leu	Glu	Glu	Gln	Leu	Gly	Ser	Cys	Ser	Cys	Lys	
				260					265					270	

Lys Asp Ser

<210> 509

<211> 1538

<212> DNA

<213> Homo sapiens

<400> 509

cccacgcgtc cgaagctggc cctgcacggc tgcaagggag gctcctgtgg 50

acaggccagg caggtgggcc tcaggaggtg cctccaggcg gccagtgggc 100  
ctgaggcccc agcaagggct aggggccatc tccagtcca ggacacagca 150  
gcggccaacca tggccacgcc tgggtccag cagcatcagc agccccagg 200  
accggggagg cacaggtggc cccaccacc cggaggagca gtcctgccc 250  
ctgtccgggg gatgactgat tctcctccgc caggccacc agaggagaag 300  
gccacccgc ctggaggcac aggccatgag gggctctcag gagtgctgc 350  
tgatgtggct tctggtgttg gcagtggcg gcacagagca cgcctaccgg 400  
cccggccgta ggggtgtgtc tgtccgggt caccgggacc ctgtctccga 450  
gtcgttcgtg cagcgtgtgt accagccctt cctcaccacc tgcgacgggc 500  
accgggcctg cagcacctac cgaaccatct ataggaccgc ctaccgccgc 550  
agccctgggc tggcccctgc caggcctcgc tacgctgct gccccggctg 600  
gaagaggacc agcgggcttc ctggggcctg tggagcagca atatgccagc 650  
cgccatgccg gaacggaggg agctgtgtcc agcctggccg ctgccgctgc 700  
cctgcaggat ggcggggtga cacttgccag tcagatgtgg atgaatgcag 750  
tgctaggagg ggcggctgtc ccagcgctg cgtcaacacc gccggcagtt 800  
actggtgcca gtgttgggag gggcacagcc tgtctgcaga cggtacactc 850  
tgtgtgcca agggagggcc cccagggtg gcccccaacc cgacaggagt 900  
ggacagtga atgaagggaag aagtgcagag gctgcagtcc aggggtggacc 950  
tgctggagga gaagctgcag ctggtgctgg cccactgca cagcctggcc 1000  
tcgcaggcac tggagcatgg gctccggac cccggcagcc tcctggtgca 1050  
ctccttcag cagctcggcc gcacgactc cctgagcgag cagatttct 1100  
tcctggagga gcagctgggg tcctgtctct gcaagaaaga ctctgactg 1150  
cccagcgccc caggctggac tgagccctc acgcccctt gcagcccca 1200  
tgcccctgcc caacatgctg ggggtccaga agccacctg gggtgactga 1250  
gcggaaggcc aggcagggcc ttctctctt tcctcctccc ctctctcggg 1300  
aggctccca gaccctggca tgggatggc tgggatcttc tctgtgaatc 1350  
caccctggc taccaccaacc ctggctacc caacggcatc ccaaggccag 1400  
gtgggcccctc agctgaggga aggtacgagc tccctgctgg agcctgggac 1450  
ccatggcaca ggccaggcag cccggaggct ggggtggggc tcagtggggg 1500

ctgctgcctg acccccagca caataaaaat gaaacgtg 1538

<210> 510

<211> 273

<212> PRT

<213> Homo sapiens

<400> 510

Met	Arg	Gly	Ser	Gln	Glu	Val	Leu	Leu	Met	Trp	Leu	Leu	Val	Leu
1				5					10					15
Ala	Val	Gly	Gly	Thr	Glu	His	Ala	Tyr	Arg	Pro	Gly	Arg	Arg	Val
				20					25					30
Cys	Ala	Val	Arg	Ala	His	Gly	Asp	Pro	Val	Ser	Glu	Ser	Phe	Val
				35					40					45
Gln	Arg	Val	Tyr	Gln	Pro	Phe	Leu	Thr	Thr	Cys	Asp	Gly	His	Arg
				50					55					60
Ala	Cys	Ser	Thr	Tyr	Arg	Thr	Ile	Tyr	Arg	Thr	Ala	Tyr	Arg	Arg
				65					70					75
Ser	Pro	Gly	Leu	Ala	Pro	Ala	Arg	Pro	Arg	Tyr	Ala	Cys	Cys	Pro
				80					85					90
Gly	Trp	Lys	Arg	Thr	Ser	Gly	Leu	Pro	Gly	Ala	Cys	Gly	Ala	Ala
				95					100					105
Ile	Cys	Gln	Pro	Pro	Cys	Arg	Asn	Gly	Gly	Ser	Cys	Val	Gln	Pro
				110					115					120
Gly	Arg	Cys	Arg	Cys	Pro	Ala	Gly	Trp	Arg	Gly	Asp	Thr	Cys	Gln
				125					130					135
Ser	Asp	Val	Asp	Glu	Cys	Ser	Ala	Arg	Arg	Gly	Gly	Cys	Pro	Gln
				140					145					150
Arg	Cys	Val	Asn	Thr	Ala	Gly	Ser	Tyr	Trp	Cys	Gln	Cys	Trp	Glu
				155					160					165
Gly	His	Ser	Leu	Ser	Ala	Asp	Gly	Thr	Leu	Cys	Val	Pro	Lys	Gly
				170					175					180
Gly	Pro	Pro	Arg	Val	Ala	Pro	Asn	Pro	Thr	Gly	Val	Asp	Ser	Ala
				185					190					195
Met	Lys	Glu	Glu	Val	Gln	Arg	Leu	Gln	Ser	Arg	Val	Asp	Leu	Leu
				200					205					210
Glu	Glu	Lys	Leu	Gln	Leu	Val	Leu	Ala	Pro	Leu	His	Ser	Leu	Ala
				215					220					225
Ser	Gln	Ala	Leu	Glu	His	Gly	Leu	Pro	Asp	Pro	Gly	Ser	Leu	Leu
				230					235					240



Val His Ser Phe Gln Gln Leu Gly Arg Ile Asp Ser Leu Ser Glu  
245 250 255

Gln Ile Ser Phe Leu Glu Glu Gln Leu Gly Ser Cys Ser Cys Lys  
260 265 270

Lys Asp Ser

<210> 511

<211> 21

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 511

tggagcagca atatgccagc c 21

<210> 512

<211> 22

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 512

ttttccactc ctgtcgggtt gg 22

<210> 513

<211> 46

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 513

ggtgacactt gccagtcaga tgtggatgaa tgcagtgcta ggaggg 46

<210> 514

<211> 2690

<212> DNA

<213> Homo sapiens

<220>

<221> unsure

<222> 2039-2065

<223> unknown base

<400> 514

ggttgccaca gctggttttag ggccccgacc actggggccc cttgtcagga 50

ggagacagcc tcccgccccg gggaggacaa gtcgctgcca cctttggctg 100

ccgacgtgat tccctgggac ggtccgtttc ctgccgtcag ctgccggccg 150  
agttgggtct ccgtgtttca ggccggctcc cccttcttgg tctcccttct 200  
cccgtgggc cggtttatcg ggaggagatt gtcttcagg gctagcaatt 250  
ggacttttga tgatgtttga ccagcggca ggaatagcag gcaacgtgat 300  
ttcaaagctg ggctcagcct ctgtttcttc tctcgtgtaa tcgcaaaacc 350  
cattttggag caggaattcc aatcatgtct gtgatggtgg tgagaaagaa 400  
ggtgacacgg aaatgggaga aactcccagg caggaacacc ttttgctgtg 450  
atggccgcgt catgatggcc cggcaaaagg gcattttcta cctgaccctt 500  
ttcctcatcc tggggacatg tacactcttc ttgcctttg agtgccgcta 550  
cctggtgtt cagctgtctc ctgccatccc tgtatttgct gccatgctct 600  
tccttttctc catggctaca ctgttgagga ccagcttcag tgaccctgga 650  
gtgattcctc gggcgctacc agatgaagca gctttcatag aaatggagat 700  
agaagctacc aatggtgcgg tgccccaggg ccagcgacca ccgcctcgta 750  
tcaagaattt ccagataaac aaccagattg tgaaactgaa atactgttac 800  
acatgcaaga tcttcgggcc tccccgggcc tccattgca gcattctgtga 850  
caactgtgtg gagcgcttcg accatcactg cccctgggtg gggaattgtg 900  
ttgaaagag gaactaccgc tacttctacc tcttcactct ttctctctcc 950  
ctcctcacia tctatgtctt cgccttcaac atcgtctatg tggccctcaa 1000  
atctttgaaa attggcttct tggagacatt gaaagaaact cctggaactg 1050  
ttctagaagt cctcatttgc ttctttacac tctggtccgt cgtgggactg 1100  
actggatttc atactttcct cgtggctctc aaccagacaa ccaatgaaga 1150  
catcaaagga tcatggacag ggaagaatcg cgtccagaat ccctacagcc 1200  
atggcaatat tgtgaagaac tgctgtgaag tgctgtgtgg ccccttgccc 1250  
cccagtgtgc tggatcgaag gggatattttg ccaactggagg aaagtggaag 1300  
tcgacctccc agtactcaag agaccagtag cagcctcttg ccacagagcc 1350  
cagccccac agaacacctg aactcaaag agatgccgga ggacagcagc 1400  
actcccgaag agatgccacc tccagagccc ccagagccac cacaggaggc 1450  
agctgaagct gagaagtagc ctatctatgg aagagacttt tgtttgtgtt 1500  
taattagggc tatgagagat ttcaggtgag aagttaaacc tgagacagag 1550

agcaagtaag ctgtcccttt taactgtttt tcttttgtct ttagtcaccc 1600  
 agttgcacac tggcattttc ttgctgcaag cttttttaaa tttctgaact 1650  
 caaggcagtg gcagaagatg tcagtcacct ctgataactg gaaaaatggg 1700  
 tctcttgggc cctggcactg gttctccatg gcctcagcca cagggtcccc 1750  
 ttggaccccc tctcttccct ccagatccca gccctcctgc ttgggggtcac 1800  
 tggctctatt ctggggctaa aagtttttga gactggctca aatcctccca 1850  
 agctgctgca cgtgctgagt ccagaggcag tcacagagac ctctggccag 1900  
 gggatcctaa ctgggttctt ggggtcttca ggactgaaga ggaggagag 1950  
 tggggtcaga agattctcct ggccaccaag tgccagcatt gccacaaaat 2000  
 ccttttagga atgggacagg taccttcac ttgttgtann nnnnnnnnnn 2050  
 nnnnnnnnnn nnnnttggt tttcctttg actcctgctc ccattaggag 2100  
 caggaatggc agtaataaaa gtctgcactt tggctatttc tttcctcag 2150  
 aggaagcccg agtgctcact taaacactat cccctcagac tcctgtgtg 2200  
 aggctgcag aggccctgaa tgcacaaatg ggaaaccaag gcacagagag 2250  
 gctctcctct cctctcctct ccccgatgt accctcaaaa aaaaaaaaaat 2300  
 gctaaccagt tcttccatta agcctcggct gagtgaggga aagcccagca 2350  
 ctgctgcct ctgggtaac tcaccctaag gcctcgccc acctctggct 2400  
 atggtaacca cactgggggc ttctccaag ccccgctctt ccagcattc 2450  
 caccggcaga gtcccagagc cacttcaccc tgggggtggg ctgtggcccc 2500  
 cagtcagctc tgctcaggac ctgctctatt tcagggaaga agatttatgt 2550  
 attatatgtg gctatatctc ctagagcacc tgtgttttcc tctttctaag 2600  
 ccagggtcct gtctggatga cttatgcggt gggggagtgt aaaccggaac 2650  
 tttcatcta tttgaaggcg attaaactgt gtctaataca 2690

<210> 515

<211> 364

<212> PRT

<213> Homo sapiens

<400> 515

Met	Ser	Val	Met	Val	Val	Arg	Lys	Lys	Val	Thr	Arg	Lys	Trp	Glu
1					5				10					15

Lys Leu Pro Gly Arg Asn Thr Phe Cys Cys Asp Gly Arg Val Met

20										25					30				
Met	Ala	Arg	Gln	Lys	Gly	Ile	Phe	Tyr	Leu	Thr	Leu	Phe	Leu	Ile					
				35					40					45					
Leu	Gly	Thr	Cys	Thr	Leu	Phe	Phe	Ala	Phe	Glu	Cys	Arg	Tyr	Leu					
				50					55					60					
Ala	Val	Gln	Leu	Ser	Pro	Ala	Ile	Pro	Val	Phe	Ala	Ala	Met	Leu					
				65					70					75					
Phe	Leu	Phe	Ser	Met	Ala	Thr	Leu	Leu	Arg	Thr	Ser	Phe	Ser	Asp					
				80					85					90					
Pro	Gly	Val	Ile	Pro	Arg	Ala	Leu	Pro	Asp	Glu	Ala	Ala	Phe	Ile					
				95					100					105					
Glu	Met	Glu	Ile	Glu	Ala	Thr	Asn	Gly	Ala	Val	Pro	Gln	Gly	Gln					
				110					115					120					
Arg	Pro	Pro	Pro	Arg	Ile	Lys	Asn	Phe	Gln	Ile	Asn	Asn	Gln	Ile					
				125					130					135					
Val	Lys	Leu	Lys	Tyr	Cys	Tyr	Thr	Cys	Lys	Ile	Phe	Arg	Pro	Pro					
				140					145					150					
Arg	Ala	Ser	His	Cys	Ser	Ile	Cys	Asp	Asn	Cys	Val	Glu	Arg	Phe					
				155					160					165					
Asp	His	His	Cys	Pro	Trp	Val	Gly	Asn	Cys	Val	Gly	Lys	Arg	Asn					
				170					175					180					
Tyr	Arg	Tyr	Phe	Tyr	Leu	Phe	Ile	Leu	Ser	Leu	Ser	Leu	Leu	Thr					
				185					190					195					
Ile	Tyr	Val	Phe	Ala	Phe	Asn	Ile	Val	Tyr	Val	Ala	Leu	Lys	Ser					
				200					205					210					
Leu	Lys	Ile	Gly	Phe	Leu	Glu	Thr	Leu	Lys	Glu	Thr	Pro	Gly	Thr					
				215					220					225					
Val	Leu	Glu	Val	Leu	Ile	Cys	Phe	Phe	Thr	Leu	Trp	Ser	Val	Val					
				230					235					240					
Gly	Leu	Thr	Gly	Phe	His	Thr	Phe	Leu	Val	Ala	Leu	Asn	Gln	Thr					
				245					250					255					
Thr	Asn	Glu	Asp	Ile	Lys	Gly	Ser	Trp	Thr	Gly	Lys	Asn	Arg	Val					
				260					265					270					
Gln	Asn	Pro	Tyr	Ser	His	Gly	Asn	Ile	Val	Lys	Asn	Cys	Cys	Glu					
				275					280					285					
Val	Leu	Cys	Gly	Pro	Leu	Pro	Pro	Ser	Val	Leu	Asp	Arg	Arg	Gly					
				290					295					300					
Ile	Leu	Pro	Leu	Glu	Glu	Ser	Gly	Ser	Arg	Pro	Pro	Ser	Thr	Gln					

	305		310		315
Glu Thr Ser Ser	Ser Leu Leu Pro Gln	Ser Pro Ala Pro Thr	Glu		
	320	325	330		
His Leu Asn Ser	Asn Glu Met Pro Glu	Asp Ser Ser Thr Pro	Glu		
	335	340	345		
Glu Met Pro Pro	Pro Glu Pro Pro Glu	Pro Pro Gln Glu Ala	Ala		
	350	355	360		

Glu Ala Glu Lys

<210> 516  
 <211> 255  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> unsure  
 <222> 36, 38, 88, 118, 135, 193, 213, 222  
 <223> unknown base

<400> 516  
 aaaaccctgt atttttttaca atgcaaatac acaatnanc tggagggtctt 50  
 tgaattaggt attatagggga tgggtgggggtt gatttttntt cctggagggt 100  
 tttggctttg gactctcnct ttctcccaca gagcncttcg accatcactg 150  
 ccctggggtg gggaattgtg ttggaaagag gaactaccgc tanttctacc 200  
 tcttcactct ttntctctcc cncctcaca totatgtctt cgccttcaac 250  
 atcgt 255

<210> 517  
 <211> 24  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 517  
 caacgtgatt tcaaagctgg gctc 24

<210> 518  
 <211> 20  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 518

gcctcgtatc aagaatttcc 20

<210> 519

<211> 18

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 519

agtggaagtc gacctccc 18

<210> 520

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 520

ctcacctgaa atctctcata gcc 24

<210> 521

<211> 50

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 521

cgcaaaaccc attttgggag caggaattcc aatcatgtct gtgatgggtg 50

<210> 522

<211> 1679

<212> DNA

<213> Homo sapiens

<400> 522

gttgtgtcct tcagcaaac agtggattta aatctccttg cacaagcttg 50

agagcaacac aatctatcag gaaagaaaga aagaaaaaaaa ccgaacctga 100

caaaaaagaa gaaaaagaag aagaaaaaaaa atcatgaaaa ccatccagcc 150

aaaaatgcac aattctatct cttgggcaat cttcacgggg ctggctgctc 200

tgtgtctctt ccaaggagtg cccgtgcgca ggggagatgc caccttcccc 250

aaagctatgg acaacgtgac ggtccggcag ggggagagcg ccacctcag 300

gtgcactatt gacaaccggg tcacccgggt ggctggcta aaccgcagca 350

ccatcctcta tgctgggaat gacaagtgtt gcctggatcc tcgcgtggtc 400

cttctgagca acacccaaac gcagtacagc atcgagatcc agaacgtgga 450  
 tgtgtatgac gagggccctt acacctgctc ggtgcagaca gacaaccacc 500  
 caaagacctc taggggccac ctcatgtgc aagtatctcc caaaattgta 550  
 gagatttctt cagatatctc cattaatgaa gggaacaata ttagcctcac 600  
 ctgcatagca actggtagac cagagcctac ggttacttgg agacacatct 650  
 ctcccaaagc ggttggtctt gtgagtgaag acgaatactt ggaaattcag 700  
 ggcatcaccg gggagcagtc aggggactac gagtgcagtg cctccaatga 750  
 cgtggccgcg cccgtggtac ggagagtaaa ggtcacogtg aactatccac 800  
 catacatttc agaagccaag ggtacaggtg tccccgtggg aaaaagggg 850  
 aactgcagtg gtgaagcctc agcagtcctc tcagcagaat tccagtggta 900  
 caaggatgac aaaagactga ttgaaggaaa gaaaggggtg aaagtggaaa 950  
 acagaccttt cctctcaaaa ctcatcttct tcaatgtctc tgaacatgac 1000  
 tatgggaact acacttgcgt ggctccaac aagctgggac acaccaatgc 1050  
 cagcatcatg ctatttggtc caggcgccgt cagcgaggtg agcaacggca 1100  
 cgtcgaggag ggcaggctgc gtctggtgc tgctcttctt ggtcttgac 1150  
 ctgcttctca aattttgatg tgagtgccac ttccccaccc gggaaaggct 1200  
 gccgccacca ccaccaccaa cacaacagca atggcaacac cgacagcaac 1250  
 caatcagata tatacaaatg aaattagaag aaacacagcc tcatgggaca 1300  
 gaaatttgag ggaggggaac aaagaatact ttggggggaa aagagtttta 1350  
 aaaaagaaat tgaatttgc cttgcagata tttaggtaca atggagtttt 1400  
 cttttcccaa acgggaagaa cacagcacac ccggcttgga cccactgcaa 1450  
 gctgcatcgt gcaacctctt tgggtgccagt gtgggcaagg gctcagcctc 1500  
 tctgccaca gagtgcccc acgtggaaca ttctggagct ggccatccca 1550  
 aattcaatca gtccatagag acgaacagaa tgagaccttc cggcccaagc 1600  
 gtggcgctgc gggcactttg gtagactgtg ccaccacggc gtgtgtgtg 1650  
 aaacgtgaaa taaaaagagc aaaaaaaaa 1679

<210> 523

<211> 344

<212> PRT

<213> Homo sapiens

<400> 523

Met	Lys	Thr	Ile	Gln	Pro	Lys	Met	His	Asn	Ser	Ile	Ser	Trp	Ala	
1				5					10					15	
Ile	Phe	Thr	Gly	Leu	Ala	Ala	Leu	Cys	Leu	Phe	Gln	Gly	Val	Pro	
				20					25					30	
Val	Arg	Ser	Gly	Asp	Ala	Thr	Phe	Pro	Lys	Ala	Met	Asp	Asn	Val	
				35					40					45	
Thr	Val	Arg	Gln	Gly	Glu	Ser	Ala	Thr	Leu	Arg	Cys	Thr	Ile	Asp	
				50					55					60	
Asn	Arg	Val	Thr	Arg	Val	Ala	Trp	Leu	Asn	Arg	Ser	Thr	Ile	Leu	
				65					70					75	
Tyr	Ala	Gly	Asn	Asp	Lys	Trp	Cys	Leu	Asp	Pro	Arg	Val	Val	Leu	
				80					85					90	
Leu	Ser	Asn	Thr	Gln	Thr	Gln	Tyr	Ser	Ile	Glu	Ile	Gln	Asn	Val	
				95					100					105	
Asp	Val	Tyr	Asp	Glu	Gly	Pro	Tyr	Thr	Cys	Ser	Val	Gln	Thr	Asp	
				110					115					120	
Asn	His	Pro	Lys	Thr	Ser	Arg	Val	His	Leu	Ile	Val	Gln	Val	Ser	
				125					130					135	
Pro	Lys	Ile	Val	Glu	Ile	Ser	Ser	Asp	Ile	Ser	Ile	Asn	Glu	Gly	
				140					145					150	
Asn	Asn	Ile	Ser	Leu	Thr	Cys	Ile	Ala	Thr	Gly	Arg	Pro	Glu	Pro	
				155					160					165	
Thr	Val	Thr	Trp	Arg	His	Ile	Ser	Pro	Lys	Ala	Val	Gly	Phe	Val	
				170					175					180	
Ser	Glu	Asp	Glu	Tyr	Leu	Glu	Ile	Gln	Gly	Ile	Thr	Arg	Glu	Gln	
				185					190					195	
Ser	Gly	Asp	Tyr	Glu	Cys	Ser	Ala	Ser	Asn	Asp	Val	Ala	Ala	Pro	
				200					205					210	
Val	Val	Arg	Arg	Val	Lys	Val	Thr	Val	Asn	Tyr	Pro	Pro	Tyr	Ile	
				215					220					225	
Ser	Glu	Ala	Lys	Gly	Thr	Gly	Val	Pro	Val	Gly	Gln	Lys	Gly	Thr	
				230					235					240	
Leu	Gln	Cys	Glu	Ala	Ser	Ala	Val	Pro	Ser	Ala	Glu	Phe	Gln	Trp	
				245					250					255	
Tyr	Lys	Asp	Asp	Lys	Arg	Leu	Ile	Glu	Gly	Lys	Lys	Gly	Val	Lys	
				260					265					270	
Val	Glu	Asn	Arg	Pro	Phe	Leu	Ser	Lys	Leu	Ile	Phe	Phe	Asn	Val	
				275					280					285	



Ser Glu His Asp Tyr Gly Asn Tyr Thr Cys Val Ala Ser Asn Lys  
290 295 300

Leu Gly His Thr Asn Ala Ser Ile Met Leu Phe Gly Pro Gly Ala  
305 310 315

Val Ser Glu Val Ser Asn Gly Thr Ser Arg Arg Ala Gly Cys Val  
320 325 330

Trp Leu Leu Pro Leu Leu Val Leu His Leu Leu Leu Lys Phe  
335 340

<210> 524

<211> 503

<212> DNA

<213> Homo sapiens

<400> 524

gaaaaaaaaat catgaaaacc atccagccaa aaatgcacaa ttctatctct 50

tgggcaatct tcacggggct ggctgctctg tgtctcttcc aaggagtgcc 100

cgtgcgacgc ggagatgcc ccttcccca agctatggac aacgtgacgg 150

tccggcaggg ggagagcgcc accctcaggt gcactattga caaccgggtc 200

acccgggtgg cctggctaaa cgcagcacc atcctctatg ctgggaatga 250

caagtgggtgc ctggatcctc gcggtgtcct tctgagcaac acccaaacgc 300

agtacagcat cgagatccag aacgtggatg tgtatgacga gggcccttac 350

acctgctcgg tgacagacaga caaccacca aagacctcta gggccacac 400

cattgtgcaa gtatctccca aaattgtaga gatttcttca gatattctca 450

ttaatgaagg gaacaatatt agcctcacct gcatagcaac tggtagacca 500

gag 503

<210> 525

<211> 2602

<212> DNA

<213> Homo sapiens

<400> 525

atggctggtg acggcggggc cgggcagggg accggggccg cggcccggga 50

gcggggccagc tgccgggagc cctgaatcac cgcttgccc gactccacca 100

tgaacgtcgc gctgcaggag ctgggagctg gcagcaacgt gggattccag 150

aaggggacaa gacagctgtt aggcacacgc acgcagctgg agctggctct 200

agcaggtgcc tctctactgc tggtgcact gcttctgggc tgccttggtg 250

ccctaggggt ccagtaccac agagacccat cccacagcac ctgccttaca 300  
gaggcctgca ttcgagtggc tggaaaaatc ctggagtccc tggaccgagg 350  
ggtgagcccc tgtgaggact tttaccagtt ctccctgtggg ggctggattc 400  
ggaggaaccc cctgcccgat gggcgttctc gctggaacac cttcaacagc 450  
ctctgggacc aaaaccaggc catactgaag cacctgcttg aaaacaccac 500  
cttcaactcc agcagtgaag ctgagcagaa gacacagcgc ttctacctat 550  
cttgccctaca ggtggagcgc attgaggagc tgggagccca gccactgaga 600  
gacctcattg agaagattgg tgggtggaac attacggggc cctgggacca 650  
ggacaacttt atggaggtgt tgaaggcagt agcagggacc tacagggcca 700  
ccccattctt caccgtctac atcagtgccg actctaagag ttccaacagc 750  
aatgttatcc aggtggacca gtctgggctc tttctgccct ctcgggatta 800  
ctacttaaac agaactgcca atgagaaagt gctcactgcc tatctggatt 850  
acatggagga actggggatg ctgctgggtg ggcggcccac ctccacgagg 900  
gagcagatgc agcaggtgct ggagttggag atacagctgg ccaacatcac 950  
agtgccccag gaccagcggc gcgacgagga gaagatctac cacaagatga 1000  
gcatttcgga gctgcaggct ctggcgccct ccatggactg gcttgagttc 1050  
ctgtctttct tgctgtcacc attggagttg agtgactctg agcctgtggt 1100  
ggtgtatggg atggattatt tgcagcaggt gtcagagctc atcaaccgca 1150  
cggaaccaag catcctgaac aattacctga tctggaacct ggtgcaaaag 1200  
acaacctcaa gcctggaccg acgctttgag tctgcacaag agaagctgct 1250  
ggagaccctc tatggcacta agaagtctg tgtgccgagg tggcagacct 1300  
gcatctccaa cacggatgac gcccttggct ttgctttggg gtcactcttc 1350  
gtgaaggcca cgtttgaccg gcaaagcaaa gaaattgcag aggggatgat 1400  
cagcgaaatc cggaccgcat ttgaggaggc cctgggacag ctggtttgga 1450  
tggatgagaa gaccgcccag gcagccaagg agaaagcaga tgccatctat 1500  
gatatgattg gtttcccaga ctttatctctg gagcccaaag agctggatga 1550  
tgtttatgac gggtagcaaa tttctgaaga ttctttcttc caaaacatgt 1600  
tgaatttgta caacttctct gccaaaggta tggctgacca gctccgcaag 1650  
cctcccagcc gagaccagtg gagcatgacc cccagacag tgaatgccta 1700

ctaccttcca actaagaatg agatcgtctt ccccgctggc atcctgcagg 1750  
 ccccttcta tgcccgaac caccccaagg cctgaactt cgggtggcatc 1800  
 ggtgtggtca tgggccatga gttgacgcat gcctttgatg accaagggcg 1850  
 cgagtatgac aaagaaggga acctgcggcc ctggtggcag aatgagtccc 1900  
 tggcagcctt ccggaaccac acggcctgca tggaggaaca gtacaatcaa 1950  
 taccaggtca atggggagag gctcaacggc cgccagacgc tgggggagaa 2000  
 cattactgac aacggggggc tgaaggctgc ctacaatgct taaaaagcat 2050  
 ggctgagaaa gcatggggag gagcagcaac tgccagccgt ggggctcacc 2100  
 aaccaccagc tcttcttcgt gggatttgcc cagggtgtggt gctcgtccg 2150  
 cacaccagag agctctcacg aggggctggt gaccgacccc cacagccctg 2200  
 cccgcttcg cgtgctgggc actctctcca actcccgta cttcctgcgg 2250  
 cacttcggct gccctgtcgg ctcccccattg aaccagggc agctgtgtga 2300  
 ggtgtggtag acctggatca ggggagaaat ggccagctgt caccagacct 2350  
 ggggcagctc tcctgacaaa gctgtttgct cttgggttg gaggaagcaa 2400  
 atgcaagctg ggctgggtct agtccctccc cccacaggt gacatgagta 2450  
 cagaccctcc tcaatcacca cattgtgcct ctgctttggg ggtgcccctg 2500  
 cctccagcag agccccacc attcactgtg acatctttcc gtgtcaccct 2550  
 gcctggaaga ggtctgggtg gggaggccag ttcccatagg aaggagtctg 2600  
 cc 2602

<210> 526

<211> 736

<212> PRT

<213> Homo sapiens

<400> 526

Met	Asn	Val	Ala	Leu	Gln	Glu	Leu	Gly	Ala	Gly	Ser	Asn	Val	Gly
1				5				10						15
Phe	Gln	Lys	Gly	Thr	Arg	Gln	Leu	Leu	Gly	Ser	Arg	Thr	Gln	Leu
				20				25						30
Glu	Leu	Val	Leu	Ala	Gly	Ala	Ser	Leu	Leu	Leu	Ala	Ala	Leu	Leu
				35				40						45
Leu	Gly	Cys	Leu	Val	Ala	Leu	Gly	Val	Gln	Tyr	His	Arg	Asp	Pro
				50				55						60

Ser	His	Ser	Thr	Cys	Leu	Thr	Glu	Ala	Cys	Ile	Arg	Val	Ala	Gly		65	70	75
Lys	Ile	Leu	Glu	Ser	Leu	Asp	Arg	Gly	Val	Ser	Pro	Cys	Glu	Asp		80	85	90
Phe	Tyr	Gln	Phe	Ser	Cys	Gly	Gly	Trp	Ile	Arg	Arg	Asn	Pro	Leu		95	100	105
Pro	Asp	Gly	Arg	Ser	Arg	Trp	Asn	Thr	Phe	Asn	Ser	Leu	Trp	Asp		110	115	120
Gln	Asn	Gln	Ala	Ile	Leu	Lys	His	Leu	Leu	Glu	Asn	Thr	Thr	Phe		125	130	135
Asn	Ser	Ser	Ser	Glu	Ala	Glu	Gln	Lys	Thr	Gln	Arg	Phe	Tyr	Leu		140	145	150
Ser	Cys	Leu	Gln	Val	Glu	Arg	Ile	Glu	Glu	Leu	Gly	Ala	Gln	Pro		155	160	165
Leu	Arg	Asp	Leu	Ile	Glu	Lys	Ile	Gly	Gly	Trp	Asn	Ile	Thr	Gly		170	175	180
Pro	Trp	Asp	Gln	Asp	Asn	Phe	Met	Glu	Val	Leu	Lys	Ala	Val	Ala		185	190	195
Gly	Thr	Tyr	Arg	Ala	Thr	Pro	Phe	Phe	Thr	Val	Tyr	Ile	Ser	Ala		200	205	210
Asp	Ser	Lys	Ser	Ser	Asn	Ser	Asn	Val	Ile	Gln	Val	Asp	Gln	Ser		215	220	225
Gly	Leu	Phe	Leu	Pro	Ser	Arg	Asp	Tyr	Tyr	Leu	Asn	Arg	Thr	Ala		230	235	240
Asn	Glu	Lys	Val	Leu	Thr	Ala	Tyr	Leu	Asp	Tyr	Met	Glu	Glu	Leu		245	250	255
Gly	Met	Leu	Leu	Gly	Gly	Arg	Pro	Thr	Ser	Thr	Arg	Glu	Gln	Met		260	265	270
Gln	Gln	Val	Leu	Glu	Leu	Glu	Ile	Gln	Leu	Ala	Asn	Ile	Thr	Val		275	280	285
Pro	Gln	Asp	Gln	Arg	Arg	Asp	Glu	Glu	Lys	Ile	Tyr	His	Lys	Met		290	295	300
Ser	Ile	Ser	Glu	Leu	Gln	Ala	Leu	Ala	Pro	Ser	Met	Asp	Trp	Leu		305	310	315
Glu	Phe	Leu	Ser	Phe	Leu	Leu	Ser	Pro	Leu	Glu	Leu	Ser	Asp	Ser		320	325	330
Glu	Pro	Val	Val	Val	Tyr	Gly	Met	Asp	Tyr	Leu	Gln	Gln	Val	Ser		335	340	345

Glu Leu Ile Asn Arg Thr Glu Pro Ser	Ile Leu Asn Asn Tyr Leu
350	355 360
Ile Trp Asn Leu Val Gln Lys Thr Thr	Ser Ser Leu Asp Arg Arg
365	370 375
Phe Glu Ser Ala Gln Glu Lys Leu Leu	Glu Thr Leu Tyr Gly Thr
380	385 390
Lys Lys Ser Cys Val Pro Arg Trp Gln	Thr Cys Ile Ser Asn Thr
395	400 405
Asp Asp Ala Leu Gly Phe Ala Leu Gly	Ser Leu Phe Val Lys Ala
410	415 420
Thr Phe Asp Arg Gln Ser Lys Glu Ile	Ala Glu Gly Met Ile Ser
425	430 435
Glu Ile Arg Thr Ala Phe Glu Glu Ala	Leu Gly Gln Leu Val Trp
440	445 450
Met Asp Glu Lys Thr Arg Gln Ala Ala	Lys Glu Lys Ala Asp Ala
455	460 465
Ile Tyr Asp Met Ile Gly Phe Pro Asp	Phe Ile Leu Glu Pro Lys
470	475 480
Glu Leu Asp Asp Val Tyr Asp Gly Tyr	Glu Ile Ser Glu Asp Ser
485	490 495
Phe Phe Gln Asn Met Leu Asn Leu Tyr	Asn Phe Ser Ala Lys Val
500	505 510
Met Ala Asp Gln Leu Arg Lys Pro Pro	Ser Arg Asp Gln Trp Ser
515	520 525
Met Thr Pro Gln Thr Val Asn Ala Tyr	Tyr Leu Pro Thr Lys Asn
530	535 540
Glu Ile Val Phe Pro Ala Gly Ile Leu	Gln Ala Pro Phe Tyr Ala
545	550 555
Arg Asn His Pro Lys Ala Leu Asn Phe	Gly Gly Ile Gly Val Val
560	565 570
Met Gly His Glu Leu Thr His Ala Phe	Asp Asp Gln Gly Arg Glu
575	580 585
Tyr Asp Lys Glu Gly Asn Leu Arg Pro	Trp Trp Gln Asn Glu Ser
590	595 600
Leu Ala Ala Phe Arg Asn His Thr Ala	Cys Met Glu Glu Gln Tyr
605	610 615
Asn Gln Tyr Gln Val Asn Gly Glu Arg	Leu Asn Gly Arg Gln Thr
620	625 630

Leu	Gly	Glu	Asn	Ile	Thr	Asp	Asn	Gly	Gly	Leu	Lys	Ala	Ala	Tyr	635	640	645
Asn	Ala	Tyr	Lys	Ala	Trp	Leu	Arg	Lys	His	Gly	Glu	Glu	Gln	Gln	650	655	660
Leu	Pro	Ala	Val	Gly	Leu	Thr	Asn	His	Gln	Leu	Phe	Phe	Val	Gly	665	670	675
Phe	Ala	Gln	Val	Trp	Cys	Ser	Val	Arg	Thr	Pro	Glu	Ser	Ser	His	680	685	690
Glu	Gly	Leu	Val	Thr	Asp	Pro	His	Ser	Pro	Ala	Arg	Phe	Arg	Val	695	700	705
Leu	Gly	Thr	Leu	Ser	Asn	Ser	Arg	Asp	Phe	Leu	Arg	His	Phe	Gly	710	715	720
Cys	Pro	Val	Gly	Ser	Pro	Met	Asn	Pro	Gly	Gln	Leu	Cys	Glu	Val	725	730	735

Trp

<210> 527  
 <211> 4308  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> unsure  
 <222> 1478, 3978, 4057-4058, 4070  
 <223> unknown base

<400> 527  
 gcccgccct ccgccctccg cactcccgcc tccctccctc cggccgctcc 50  
 cgcgcctcc tccctccctc ctccccagct gtcccggtcg cgtcatgccg 100  
 agcctcccg ccccgccggc cccgctgctg ctctcgggc tgctgctgct 150  
 cggctcccg cgggcccgcg gcgcggccc agagcccccc gtgctgcca 200  
 tccgttctga gaaggagccg ctgcccggtc ggggagcggc aggtaggtgg 250  
 gcgccccggg gaggcgcggg cggggagtcg ggctcggggc gaggcagcgc 300  
 cagccccgag ggggcgcggg gcgcaggtgg ctgggcgcgg cgggcggccc 350  
 ggagggtgg cgggggcaga agggcgcggt gcctgggacc cgggacccgc 400  
 gggcagcccc cggggcgga caccggcgga gctgggcagc ggcctccagc 450  
 caagcccgtc cccgcaggct gcaccttcgg cgggaaggtc tatgccttgg 500  
 acgagacgtg gcaccgggac ctaggggagc cattcggggg gatgcgctgc 550

gtgctgtgcg cctgcgaggc gcagtggggt cgccgtacca ggggccctgg 600  
cagggtcagc tgcaagaaca tcaaaccaga gtgcccaacc ccggcctgtg 650  
ggcagccgcg ccagctgccg ggacactgct gccagacctg ccccaggac 700  
ttcgtggcgc tgctgacagg gccgaggteg caggcggtgg cacgagcccg 750  
agtctcgctg ctgcgctcta gcctccgctt ctctatctcc tacaggcggc 800  
tggaccgccc taccaggatc cgcttctcag actccaatgg cagtgtcctg 850  
tttgagcacc ctgcagcccc cacccaagat ggctggtct gtggggtgtg 900  
gcgggcagtg cctcggttgt ctctcggtt ccttagggca gaacagctgc 950  
atgtggcact tgtgacactc actcaccctt caggggaggt ctgggggcct 1000  
ctcatccggc accgggccct gtccccagag accttcagtg ccatacctgac 1050  
tctagaaggc ccccaccagc agggcgtagg gggcatcacc ctgctcactc 1100  
tcagtgacac agaggactcc ttgcattttt tgctgctctt ccgaggcctt 1150  
gcaggactaa ccaggttcc cttgaggctc cagattctac accaggggca 1200  
gctactgca gaacttcagg ccaatgtctc agcccaggaa ccaggctttg 1250  
ctgagggtgt gcccaacctg acagtccagg agatggactg gctggtgctg 1300  
ggggagctgc agatggccct ggagtgggca ggcaggccag ggctgcgcat 1350  
cagtggacac attgctgcca ggaagagctg cgacgtcctg caaagtgtcc 1400  
tttgtggggc taatgcctg atcccagtc aaacgggtgc tgccggctca 1450  
gccagcctca ctctgctagg aaatggcncc ctgatcctcc aggtgcaatt 1500  
ggtagggaca accagtgagg tggtaggcat gacactggaa accaagcctc 1550  
agcggaggga tcagccact gtctgtgcc acatggctgg cctatcctcc 1600  
cctgccccca ggccgtgggt atctgccctg ggctggggtg ccgaggggc 1650  
tcatatgctg ctgcagaatg agctcttcc gaacgtgggc accaaggact 1700  
tcccagacgg agagcttcgg gggcaacgtg gctgccctgc cctactgtgg 1750  
ggcatagcgc ccgccctgcc cgtgcccta gcaggagccc tgggtgctacc 1800  
ccctgtgaag agccaagcag cagggcacgc ctggctttcc ttggataccc 1850  
actgtcacct gcactatgaa gtgctgctgg ctgggcttgg tggctcagaa 1900  
caaggcactg tcaactgcca cctccttggg cctcctggaa cgccagggcc 1950  
tcggcggtg ctgaagggat tctatggctc agaggcccag ggtgtggtga 2000

aggacctgga gccggaactg ctgcggcacc tggcaaaagg catggcttcc 2050  
ctgatgatca ccaccaaggt agccccagag gggagctccg agggcagcct 2100  
ctcctcccag gtgcacatag ccaaccaatg tgaggttggc ggactgcgcc 2150  
tggaggcggc cggggccgag ggggtgcggg cgctgggggc tccggataca 2200  
gcctctgctg cgccgctgt ggtgcctggt ctcccggccc tagcgccgc 2250  
caaacctggt ggtcctgggc ggccccgaga cccaacaca tgcttcttcg 2300  
aggggcagca gcgccccac ggggctcgt gggcgccaa ctacgaccgc 2350  
ctctgctcac tctgcacctg ccagagacga acggtgatct gtgaccgggt 2400  
ggtgtgcca ccgcccagct gcccacacc ggtgcaggct ccgaccagt 2450  
gctgcctgt ttgcctggc tgctattttg atggtgaccg gagctggcg 2500  
gcagcgggta cggggtggca ccccgtttg cccccccttg gcttaattaa 2550  
gtgtgctgtc tgcacctgca agcagggggg cactggagag gtgactgtg 2600  
agaaggtgca gtgtccccg ctggcctgtg ccagcctgt gcgtgtcaac 2650  
cccaccgact gctgcaaaca gtgtccagggt gaggccacc ccagctggg 2700  
ggaccccatg caggctgatg ggccccggg ctgccgtttt gctgggcagt 2750  
ggttcccaga gagtcagagc tggcacccct cagtgcctcc gtttggagag 2800  
atgagctgta tcacctgcag atgtgggta agtggggagc agaggcttgt 2850  
gtgaggtggg tactgggagc ctggtctgga gtagggagac cttcccaggg 2900  
aggccctga agaagctgaa ggtcactgtg tccagtgcc tctgggggac 2950  
actcagtgtc tgctctgtct tgtaccaggc aggggtgcct cactgtgagc 3000  
gggatgactg ttcactgcca ctgtcctgtg gctcggggaa ggagagtcga 3050  
tgctgttccc gctgcacggc ccaccggcg cgtaagttag ggagtccagg 3100  
gtcagcagct gtgagtggag ggctcacctg cctgtgggac tcctgatcag 3150  
ggaaggagc actcactgtg tgcaggaaca gtgcagcctg cctcacaagt 3200  
gccattccaa tccaccctca cagcaacctg gtggaattgt tatttatgac 3250  
cttttcttta caaatgagat ttctgaagct cagagaaatt aagcaacgag 3300  
atgaaggtea ccagctgtg tgcactgacc tgtttagaaa atactggcct 3350  
ttctgggacc aaggcaggga tgctttgcc tgccctctat gcctctctgt 3400



gcctctccac tccctctccc ctccctcaac attccctccc ttctgtctcc 3450  
 agcagcccca gagaccagaa ctgatccaga gctggagaaa gaagccgaag 3500  
 gctcttaggg agcagccaga gggccaagtg accaagagga tggggcctga 3550  
 gctggggaag ggggtggcatc gaggaccttc ttgcattctc ctgtgggaag 3600  
 cccagtgcct ttgtctctct gtccctgcctc tactcccacc cccactacct 3650  
 ctgggaacca cagctccaca agggggagag gcagctgggc cagaccgagg 3700  
 tcacagccac tccaagtcct gccctgccac cctcggcctc tgtcctggaa 3750  
 gccccacccc tttcttctctg tacataatgt cactggcttg ttgggatttt 3800  
 taatttatct tcactcagca ccaagggccc cggacactcc actcctgctg 3850  
 cccctgagct gagcagagtc attattggag agttttgtat ttattaaaac 3900  
 atttcttttt cagtcttttg gcatgaggtt ggctctttgt ggccaggaac 3950  
 ctgagtgggg cctggtggag aaggggcnga gtagtaggag tgagagagag 4000  
 gagctctgac acttggggag ctgaaagaga cctggagagg cagaggatag 4050  
 cgtggcnntt ggctggcatn cctgggttcc gcagaggggc tggggatggt 4100  
 tcttgagatg gtctagagac tcaagaattt aggggaagtag aagcaggatt 4150  
 ttgactcaag tttagtttcc cacatcgctg gcctgtttgc tgacttcatg 4200  
 tttgaagttg ctccagagag agaatcaaag gtgtcaccag cccctctctc 4250  
 cctccttccc ttccttccc tttcttccc tccctccc tccctccc 4300  
 tccctcc 4308

<210> 528

<211> 1285

<212> DNA

<213> Homo sapiens

<400> 528

ggccgagcgg ggggtgctgcg cggcggccgt gatggctggt gacggcgggg 50  
 ccgggcaggg gaccggggcc gcggcccggg agcgggccag ctgccgggag 100  
 ccctgaatca ccgctggcc cgactccacc atgaacgtcg cgctgcagga 150  
 gctgggagct ggagcaacg tgggattcca gaaggggaca agacagctgt 200  
 taggctcacg cacgagctg gagctggtct tagcaggtgc ctctctactg 250  
 ctggtgcac tgettctggg ctgccttgtg gccctagggg tccagtacca 300  
 cagagacca tcccacagca cctgccttac agaggcctgc attcagtggt 350

ctggaaaaat cctggagtcc ctggaccgag gggtagagccc ctgtgaggac 400  
 ttttaccagt tctcctgtgg gggtggatt cggaggaacc ccctgcccga 450  
 tgggcgttct cgctggaaca cttcaacag cctctgggac caaaaccagg 500  
 ccatactgaa gcacctgctt gaaaacacca cttcaactc cagcagttaa 550  
 gctgagcaga agacacagcg cttctaccta tcttgccctac aggtggagcg 600  
 cattgaggag ctgggagccc agccactgag agacctcatt gagaagattg 650  
 gtggttgga cttacgggg ccctgggacc aggacaactt tatggagggtg 700  
 ttgaaggcag tagcaggggac ctacaggggc accccattct tcaccgtcta 750  
 catcagtgcc gactctaaga gttccaacag caatgttata cagggtggacc 800  
 agtctgggct ctttctgccc tctcgggatt actacttaaa cagaactgcc 850  
 aatgagaaaag taaggaacat cttccgaacc cccatcccta ccctgggctg 900  
 agctgggctg atccctgttg acttttccct ttgccaaggg tcagagcagg 950  
 gaaggtgagc ctatcctgtc acctagttaa caaactgccc ctccctttctt 1000  
 tcttcttttc ttcctccctc cctcccttct tccccctttt ccttccttcc 1050  
 ttcctcttat tcttctagta ggtttcatag acacctactg tgtgccagggt 1100  
 ccagtggggg aattcggaga tataagtttc cgagccattg ccacaggaag 1150  
 cgttcagtgt cgatgggttc atggacctag ataggctgat aacaaagctc 1200  
 acaagagggt cctgaggatt caggagagac ttatggagcc agcaaagtct 1250  
 tcctgaagag attgcatttg agccagggtcc tgtag 1285

<210> 529

<211> 1380

<212> DNA

<213> Homo sapiens

<400> 529

atgcctacta ccttccaact aagaatgaga tcgtcttccc cgctggcatc 50  
 ctgcaggccc ctttctatgc ccgcaaccac cccaaggccc tgaacttcgg 100  
 tggcatcggt gtggctcatg gccatgagtt gacgcatgcc tttgatgacc 150  
 aagggcgcga gtatgacaaa gaagggaacc tgcggccctg gtggcagaat 200  
 gagtccctgg cagccttccg gaaccacacg gcctgcatgg aggaacagta 250  
 caatcaatac caggtcaatg gggagagggt caacggccgc cagacgctgg 300

gggagaacat tgctgacaac ggggggctga aggctgccta caatgcttac 350  
 aaagcatggc tgagaaagca tggggaggag cagcaactgc cagccgtggg 400  
 gctcaccaac caccagctct tcttcgtggg atttgcccag gtgtggtgct 450  
 cgggtccgcac accagagagc tctcacgagg ggctggtgac cgacccccac 500  
 agccctgccc gcttcgcgct gctgggcact ctctccaact cccgtgactt 550  
 cctgcggcac ttcggctgcc ctgtcggctc ccccatgaac ccagggcagc 600  
 tgtgtgaggt gtggtagacc tggatcaggg gagaaatggc cagctgtcac 650  
 cagacctggg gcagctctcc tgacaaagct gtttgctctt gggttgggag 700  
 gaagcaaatg caagctgggc tgggtctagt ccctcccccc cacagggtgac 750  
 atgagtacag accctcctca atcaccacat tgtgcctctg ctttggggggt 800  
 gccctgcct ccagcagagc ccccaccatt cactgtgaca tctttccgtg 850  
 tcacctgcc tgaagaggt ctgggtgggg aggccagttc ccataggaag 900  
 gagtctgcct cttctgtccc caggctcact cagcctggcg gccatggggc 950  
 ctgccgtgcc tgccccactg tgaccacag gcctgggtgg tgtacctct 1000  
 ggacttctcc ccaggetcac tcagtgcga cttaggggtg gactcagctc 1050  
 tgtctggctc accctcacgg gctaccccca cctcaccctg tgctccttgt 1100  
 gccactgctc ccagtgtctg tgctgacctt cactgacagc tcctagtggg 1150  
 agcccaaggg cctctgaaag cctcctgctg cccactgttt ccctgggctg 1200  
 agaggggaag tgcatatgtg tagcgggtac tggttcctgt gtcttagggc 1250  
 acaagcctta gcaaatgatt gattctccct ggacaaagca ggaaagcaga 1300  
 tagagcaggg aaaaggaaga acagagttta tttttacaga aaagagggtg 1350  
 ggaggggtgtg gtcttgcccc ttataggacc 1380

<210> 530

<211> 39

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 530

gaagcagtg agccagcagt agagaggcac ctgctaaga 39

<210> 531

<211> 24

<212> DNA  
<213> Artificial Sequence  
  
<220>  
<223> Synthetic oligonucleotide probe  
  
<400> 531  
acgcagctgg agctggtctt agca 24  
  
<210> 532  
<211> 24  
<212> DNA  
<213> Artificial Sequence  
  
<220>  
<223> Synthetic oligonucleotide probe  
  
<400> 532  
ggtactggac ccctagggcc acaa 24  
  
<210> 533  
<211> 21  
<212> DNA  
<213> Artificial Sequence  
  
<220>  
<223> Synthetic oligonucleotide probe  
  
<400> 533  
cctcccagcc gagaccagtg g 21  
  
<210> 534  
<211> 21  
<212> DNA  
<213> Artificial Sequence  
  
<220>  
<223> Synthetic oligonucleotide probe  
  
<400> 534  
ggtcctataa gggccaagac c 21  
  
<210> 535  
<211> 44  
<212> DNA  
<213> Artificial Sequence  
  
<220>  
<223> Synthetic oligonucleotide probe  
  
<400> 535  
gactagttct agatcgcgag cggccgccct tttttttttt tttt 44  
  
<210> 536  
<211> 16  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 536  
cggacgcgtg ggtcga 16

<210> 537  
<211> 21  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 537  
cggccgtgat ggctggtgac g 21

<210> 538  
<211> 20  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 538  
ggcagactcc ttcctatggg 20

<210> 539  
<211> 21  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 539  
ggcacttcat ggtccttgaa a 21

<210> 540  
<211> 22  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 540  
cggatgtgtg tgaggccatg cc 22

<210> 541  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 541

gaaagtaacc acggaggtca agat 24

<210> 542

<211> 21

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 542

cctcctccga gactgaaagc t 21

<210> 543

<211> 22

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 543

tcgcgttgct ttttctcgcg tg 22

<210> 544

<211> 17

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 544

gcgtgcgtca ggtcca 17

<210> 545

<211> 19

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 545

cgttcgtgca gcgtgtgta 19

<210> 546

<211> 22

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 546  
cttcttcacc acctgcgacg gg 22

<210> 547  
<211> 23  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 547  
ggtaggcggt cctatagatg gtt 23

<210> 548  
<211> 23  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 548  
agatgtggat gaatgcagtg cta 23

<210> 549  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 549  
atcaacaccg ccggcagtta ctgg 24

<210> 550  
<211> 23  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 550  
acagagtgtta ccgtctgcag aca 23

<210> 551  
<211> 19  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 551  
agcctcctgg tgcactcct 19

<210> 552  
<211> 25  
<212> DNA  
<213> Artificial Sequence  
  
<220>  
<223> Synthetic oligonucleotide probe  
  
<400> 552  
cgactccctg agcgagcaga tttcc 25  
  
<210> 553  
<211> 20  
<212> DNA  
<213> Artificial Sequence  
  
<220>  
<223> Synthetic oligonucleotide probe  
  
<400> 553  
gctgggcagt cacgagtctt 20  
  
<210> 554  
<211> 24  
<212> DNA  
<213> Artificial Sequence  
  
<220>  
<223> Synthetic oligonucleotide probe  
  
<400> 554  
aatcctccat ctcagatctt ccag 24  
  
<210> 555  
<211> 21  
<212> DNA  
<213> Artificial Sequence  
  
<220>  
<223> Synthetic oligonucleotide probe  
  
<400> 555  
cctcagcggc aacagccggc c 21  
  
<210> 556  
<211> 15  
<212> DNA  
<213> Artificial Sequence  
  
<220>  
<223> Synthetic oligonucleotide probe  
  
<400> 556  
tgggccaagg gctgc 15  
  
<210> 557



<211> 22  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 557  
tggtggataa ccaacaagat gg 22

<210> 558  
<211> 34  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 558  
gagtctgcat ccacaccact cttaaagttc tcaa 34

<210> 559  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 559  
caggtgctct tttcagtcac gttt 24

<210> 560  
<211> 21  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 560  
tggccattct caggacaaga g 21

<210> 561  
<211> 26  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> synthetic oligonucleotide probe

<400> 561  
cagtaatgcc atttgccctgc ctgcat 26

<210> 562  
<211> 19  
<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 562

tgccctggaat cacatgaca 19

<210> 563

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> synthetic oligonucleotide probe

<400> 563

tgtggcacag acccaatcct 20

<210> 564

<211> 21

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 564

gaccctgaag gcctccggcc t 21

<210> 565

<211> 23

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 565

gagagaggga aggcagctat gtc 23

<210> 566

<211> 21

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 566

cagcccctct ctttcacctg t 21

<210> 567

<211> 25

<212> DNA

<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 567  
ccatcctgtg cagctgacac acagc 25

<210> 568  
<211> 20  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 568  
gccaggctat gaggtcctt 20

<210> 569  
<211> 23  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 569  
ttcaagttcc tgaagccgat tat 23

<210> 570  
<211> 23  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 570  
ccaacttccc tccccagtgc cct 23

<210> 571  
<211> 26  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 571  
ttggggaagg tagaatttcc ttgtat 26

<210> 572  
<211> 20  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 572  
cccttctgcc tcccaattct 20

<210> 573  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 573  
tctcctccgt ccccttcctc cact 24

<210> 574  
<211> 20  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 574  
tgagccactg ccttgcatta 20

<210> 575  
<211> 20  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 575  
tctgcagacg cgatggataa 20

<210> 576  
<211> 26  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 576  
ccgaaaataa aacatcgccc cttctg 26

<210> 577  
<211> 20  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 577

cacgtggcct ttcacactga 20

<210> 578

<211> 25

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 578

acttgtgaca gcagtatgct gtctt 25

<210> 579

<211> 26

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 579

aagcttctgt tcaatcccag cggctc 26

<210> 580

<211> 22

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 580

atgcacaggc tttttctggg aa 22

<210> 581

<211> 22

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 581

gcaggaaacc ttcgaatctg ag 22

<210> 582

<211> 29

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 582

acacctgagg cacctgagag aggaactct 29

<210> 583  
<211> 21  
<212> DNA  
<213> Artificial Sequence  
  
<220>  
<223> Synthetic oligonucleotide probe  
  
<400> 583  
gacagcccag tacacctgca a 21  
  
<210> 584  
<211> 21  
<212> DNA  
<213> Artificial Sequence  
  
<220>  
<223> Synthetic oligonucleotide probe  
  
<400> 584  
gacggctgga tctgtgagaa a 21  
  
<210> 585  
<211> 21  
<212> DNA  
<213> Artificial Sequence  
  
<220>  
<223> Synthetic oligonucleotide probe  
  
<400> 585  
cacaactgct gaccccgccc a 21  
  
<210> 586  
<211> 20  
<212> DNA  
<213> Artificial Sequence  
  
<220>  
<223> Synthetic oligonucleotide probe  
  
<400> 586  
ccaggatacg acatgctgca 20  
  
<210> 587  
<211> 24  
<212> DNA  
<213> Artificial Sequence  
  
<220>  
<223> Synthetic oligonucleotide probe  
  
<400> 587  
aaactccaac ctgtatcaga tgca 24  
  
<210> 588  
<211> 25

<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 588  
cccccaagcc cttagactct aagcc 25

<210> 589  
<211> 19  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 589  
gacccggcac cttgctaac 19

<210> 590  
<211> 21  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 590  
ggacggtcag tcaggatgac a 21

<210> 591  
<211> 25  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 591  
ttcggcatca tcttttcct ctccc 25

<210> 592  
<211> 25  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 592  
acaaaaaaaa gggaacaaaa tacga 25

<210> 593  
<211> 28  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 593  
cttgaatag aagacttctg gacaattt 28

<210> 594  
<211> 30  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 594  
ttgcaactgg gaatatacca cgacatgaga 30

<210> 595  
<211> 26  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 595  
tagggtgcta atttgtgcta taacct 26

<210> 596  
<211> 20  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 596  
ggctctgagt ctctgcttga 20

<210> 597  
<211> 25  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 597  
tccaacaacc attttctct ggtcc 25

<210> 598  
<211> 23  
<212> DNA  
<213> Artificial Sequence

<220>



<223> Synthetic oligonucleotide probe

<400> 598

aagcagtagc cattaacaag tca 23

<210> 599

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 599

caagcgtcca gggtttattga 20

<210> 600

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 600

gactacaagg cgctcagcta 20

<210> 601

<211> 21

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 601

ccggctgggt ctcaactctc c 21

<210> 602

<211> 19

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 602

cgttcgtgca gcgtgtgta 19

<210> 603

<211> 22

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 603  
cttcctcacc acctgcgacg gg 22

<210> 604  
<211> 23  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 604  
ggtaggcggt cctatagatg gtt 23

<210> 605  
<211> 23  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 605  
agatgtggat gaatgcagtg cta 23

<210> 606  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 606  
atcaacaccg ccggcagtta ctgg 24

<210> 607  
<211> 23  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 607  
acagagtgtta ccgtctgcag aca 23

<210> 608  
<211> 19  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 608  
agcctcctgg tgcactcct 19

<210> 609  
<211> 25  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 609  
cgactccctg agcgagcaga tttcc 25

<210> 610  
<211> 20  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 610  
gctgggcagt cacgagtctt 20

<210> 611  
<211> 2840  
<212> DNA  
<213> Homo Sapien

<400> 611  
cccacgcgtc cgagccgccc gagaattaga cacactccgg acgcggccaa 50  
aaagcaaccga gaggagggga ggcaaaaaca ccgaaaaaca aaaagagaga 100  
aacaacaccc aacaactggg gtggggggaa gaaagaaaga aaagaaaccc 150  
accacccac caaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaatc 200  
ctgtggcgcg ccgcctgggt cccgggaaga ctgccagca ccagggggtg 250  
ggggagtgcg agctgaaagc tgctggagag tgagcagccc tagcagggat 300  
ggacatgatg ctgttggtgc aggggtgctt ttgctcgaac cagtggctgg 350  
cggcgggtgct cctcagcctg tgctgcctgc taccctcctg cctcccggct 400  
ggacagagtg tggacttccc ctgggcggcc gtggacaaca tgatggtcag 450  
aaaaggggac acggcgggtg ttaggtgtta ttggaagat ggagcttcaa 500  
agggtgctcg gctgaaccgg tcaagtatta tttttgcggg aggtgataag 550  
tggtcagtgg atcctcgagt ttcaatttca acattgaata aaagggacta 600  
cagcctccag atacagaatg tagatgtgac agatgatggc ccatacacgt 650  
gttctgttca gactcaacat acaccagaa caatgcaggt gcattctaact 700

gtgcaagttc ctccctaagat atatgacatc tcaaatgata tgaccgtcaa 750  
tgaaggaacc aacgtcactc ttacttgttt ggccactggg aaaccagagc 800  
cttccatttc ttggcgacac atctcccat cagcaaaacc atttgaaaat 850  
ggacaatatt tggacattta tggaattaca agggaccagg ctggggaata 900  
tgaatgcagt gcggaaaatg ctgtgtcatt cccagatgtg aggaaagtaa 950  
aagtgttgt caactttgct cctactattc aggaaattaa atctggcacc 1000  
gtgacccccg gacgcagtgg cctgataaga tgtgaagggtg cagggtgtgcc 1050  
gcctccagcc tttgaatggt acaaaggaga gaagaagctc ttcaatggcc 1100  
aacaaggaat tattattcaa aatttttagca caagatccat tctcactgtt 1150  
accaacgtga cacaggagca cttcggcaat tatacctgtg tggctgcaa 1200  
caagctaggg acaaccaatg cgagcctgcc tcttaaccct ccaagtacag 1250  
cccagtatgg aattaccggg agcgtgatg ttcttttctc ctgctggtac 1300  
cttgtgttga cactgtcctc tttcaccagc atattctacc tgaagaatgc 1350  
cattctacaa taaattcaaa gaccataaa aggcttttaa ggattctctg 1400  
aaagtgtga tggctggatc caatctggta cagtttgta aaagcagcgt 1450  
gggatataat cagcagtgtc tacatgggga tgatcgcctt ctgtagaatt 1500  
gctcattatg taaatacttt aattctactc ttttttgatt agctacatta 1550  
ccttgtgaag cagtacacat tgtcctttt ttaagacgtg aaagctctga 1600  
aattactttt agaggatatt aattgtgatt tcatgtttgt aatctacaac 1650  
ttttcaaaag cattcagtca tggctctgta ggttgcaggc tgtagtttac 1700  
aaaaacgaat attgcagtga atatgtgatt cttaaggct gcaatacaag 1750  
cattcagttc cctgtttcaa taagagtcaa tccacattta caaagatgca 1800  
tttttttctt ttttgataaa aaagcaaata atattgcctt cagattattt 1850  
cttcaaaata taacacatat ctagattttt ctgcttgcat gatattcagg 1900  
tttcaggaat gagccttgta atataactgg ctgtgcagct ctgcttctct 1950  
ttcctgtaag ttcagcatgg gtgtgccttc atacaataat attttctct 2000  
ttgtctcaa ctaataataa atgttttgct aaatcttaca atttgaaagt 2050  
aaaaataaac cagagtgatc aagttaaacc atacactatc tctaagtaac 2100  
gaaggagcta ttggactgta aaaatctctt cctgactga caatgggggt 2150

tgagaatttt gccccacact aactcagttc ttgtgatgag agacaattta 2200  
 ataacagtat agtaaataata ccatatgatt tcttttagttg tagctaaatg 2250  
 ttagatccac cgtgggaaat cattcccttt aaaatgacag cacagtccac 2300  
 tcaaaggatt gcctagcaat acagcatctt ttcctttcac tagtccaagc 2350  
 caaaaatttt aagatgattt gtcagaaagg gcacaaagtc ctatcaccta 2400  
 atattacaag agttggtaag cgctcatcat taattttatt ttgtggcagg 2450  
 tattatgaca gtgcacctgg agggatatgga tatggatatg gacgttccag 2500  
 agactataat ggcagaaacc agggtggtta tgaccgctac tcaggaggaa 2550  
 attacagaga caattatgac aactgaaatg agacatgcac ataatataga 2600  
 tacacaagga ataatttctg atccaggatc gtccttccaa atggctgtat 2650  
 ttataaaggt ttttgagct gcaactgaagc atcttatttt atagtatatc 2700  
 aaccttttgt ttttaaattg acctgccaag gtagctgaag accttttaga 2750  
 cagttccatc ttttttttta aattttttct gcctatttaa agacaaatta 2800  
 tgggacgttt gtcaaaaaaa aaaaaaaaaa aaaaaaaaaa 2840

<210> 612

<211> 352

<212> PRT

<213> Homo Sapien

<400> 612

Met	Met	Leu	Leu	Val	Gln	Gly	Ala	Cys	Cys	Ser	Asn	Gln	Trp	Leu
1				5						10				15
Ala	Ala	Val	Leu	Leu	Ser	Leu	Cys	Cys	Leu	Leu	Pro	Ser	Cys	Leu
				20					25					30
Pro	Ala	Gly	Gln	Ser	Val	Asp	Phe	Pro	Trp	Ala	Ala	Val	Asp	Asn
				35					40					45
Met	Met	Val	Arg	Lys	Gly	Asp	Thr	Ala	Val	Leu	Arg	Cys	Tyr	Leu
				50					55					60
Glu	Asp	Gly	Ala	Ser	Lys	Gly	Ala	Trp	Leu	Asn	Arg	Ser	Ser	Ile
				65					70					75
Ile	Phe	Ala	Gly	Gly	Asp	Lys	Trp	Ser	Val	Asp	Pro	Arg	Val	Ser
				80					85					90
Ile	Ser	Thr	Leu	Asn	Lys	Arg	Asp	Tyr	Ser	Leu	Gln	Ile	Gln	Asn
				95					100					105
Val	Asp	Val	Thr	Asp	Asp	Gly	Pro	Tyr	Thr	Cys	Ser	Val	Gln	Thr

110	115	120
Gln His Thr Pro Arg Thr Met Gln Val	His Leu Thr Val Gln Val	
125	130	135
Pro Pro Lys Ile Tyr Asp Ile Ser Asn	Asp Met Thr Val Asn Glu	
140	145	150
Gly Thr Asn Val Thr Leu Thr Cys Leu	Ala Thr Gly Lys Pro Glu	
155	160	165
Pro Ser Ile Ser Trp Arg His Ile Ser	Pro Ser Ala Lys Pro Phe	
170	175	180
Glu Asn Gly Gln Tyr Leu Asp Ile Tyr	Gly Ile Thr Arg Asp Gln	
185	190	195
Ala Gly Glu Tyr Glu Cys Ser Ala Glu	Asn Ala Val Ser Phe Pro	
200	205	210
Asp Val Arg Lys Val Lys Val Val Val	Asn Phe Ala Pro Thr Ile	
215	220	225
Gln Glu Ile Lys Ser Gly Thr Val Thr	Pro Gly Arg Ser Gly Leu	
230	235	240
Ile Arg Cys Glu Gly Ala Gly Val Pro	Pro Pro Ala Phe Glu Trp	
245	250	255
Tyr Lys Gly Glu Lys Lys Leu Phe Asn	Gly Gln Gln Gly Ile Ile	
260	265	270
Ile Gln Asn Phe Ser Thr Arg Ser Ile	Leu Thr Val Thr Asn Val	
275	280	285
Thr Gln Glu His Phe Gly Asn Tyr Thr	Cys Val Ala Ala Asn Lys	
290	295	300
Leu Gly Thr Thr Asn Ala Ser Leu Pro	Leu Asn Pro Pro Ser Thr	
305	310	315
Ala Gln Tyr Gly Ile Thr Gly Ser Ala	Asp Val Leu Phe Ser Cys	
320	325	330
Trp Tyr Leu Val Leu Thr Leu Ser Ser	Phe Thr Ser Ile Phe Tyr	
335	340	345
Leu Lys Asn Ala Ile Leu Gln		
350		

<210> 613  
 <211> 1797  
 <212> DNA  
 <213> Homo Sapien

<400> 613  
 agtgggttcga tgggaaggat ctttctccaa gtggttcctc ttgaggggag 50

catttctgct ggctccagga ctttggccat ctataaagct tggcaatgag 100  
aaataagaaa atttctcaagg aggacgagct cttgagttag acccaacaag 150  
ctgcttttca ccaaattgca atggagcctt tcgaaatcaa tgttccaaag 200  
cccaagagga gaaatggggt gaacttctcc ctagctgtgg tggatcatcta 250  
cctgatcctg ctaccgctg gcgctgggct gctggtggc caagttctga 300  
atctgcaggc ggggctccg gtccctggaga tgtatttct caatgacact 350  
ctggcggctg aggacagccc gtccttctcc ttgctgcagt cagcacaccc 400  
tggagaacac ctggctcagg gtgcatcgag gctgcaagtc ctgcaggccc 450  
aactcacctg ggtccgctc agccatgagc acttgctgca gcgggtagac 500  
aacttcactc agaaccagg gatgttcaga atcaaagggt aacaaggcgc 550  
cccaggctct caaggtcaca agggggccat gggcatgcct ggtgcccctg 600  
gcccgccggg accacctgct gagaaggag ccaaggggc tatgggacga 650  
gatggagcaa caggccctc gggaccccaa ggccaccg gatgcaagg 700  
agaggcggc ctccaaggac ccagggtgc tccagggaag caaggagcca 750  
ctggcaccac aggaccccaa ggagagaagg gcagcaaagg cgatgggggt 800  
ctcattggcc caaaagggga aactggaact aaggagaga aaggagacct 850  
gggtctcca ggaagcaaag gggacaggg catgaaagg gatgcaggg 900  
tcatggggcc tctggagcc caggggagta aagggtactt cgggaggcca 950  
ggcccaccag gtttggtggt ttttctgga gctaaaggag atcaaggaca 1000  
acctggactg cagggtgttc cgggccctcc tgggtgcagt ggacaccag 1050  
gtgccaaggg tgagcctggc agtgctggct cccctgggc agcaggactt 1100  
ccaggagacc cgggagtc aggagccaca ggcctgaaag gaagcaaagg 1150  
ggacacagga cttcaaggac agcaaggaag aaaaggagaa tcaggagtgc 1200  
caggccctgc aggtgtgaag ggagaacagg ggagcccagg gctggcaggt 1250  
cccaaggag cccctggaca agctggccag aaggagacc agggagtga 1300  
aggatcttct ggggagcaag gagtaaagg agaaaaagg gaaagaggtg 1350  
aaaactcagt gtccgtcagg attgtcggca gtagtaacc aggccgggct 1400  
gaagtttact acagtggtag ctgggggaca atttgcgatg acgagtggca 1450

aaattctgat gccattgtct tctgccgcat gctgggttac tccaaaggaa 1500  
 gggccctgta caaagtggga gctggcactg ggcagatctg gctggataat 1550  
 gttcagtgtc ggggcacgga gactaccctg tggagctgca ccaagaatag 1600  
 ctggggccat catgactgca gccacgagga ggacgcaggc gtggagtga 1650  
 gcgtctgacc cggaaccct ttcacttctc tgctcccgag gtgtcctcgg 1700  
 gctcatatgt gggaaggcag aggatctctg aggagttccc tggggacaac 1750  
 tgagcagcct ctggagaggg gccattaata aagctcaaca tcattga 1797

<210> 614

<211> 520

<212> PRT

<213> Homo Sapien

<400> 614

Met	Arg	Asn	Lys	Lys	Ile	Leu	Lys	Glu	Asp	Glu	Leu	Leu	Ser	Glu	1	5	10	15
Thr	Gln	Gln	Ala	Ala	Phe	His	Gln	Ile	Ala	Met	Glu	Pro	Phe	Glu	20	25	30	
Ile	Asn	Val	Pro	Lys	Pro	Lys	Arg	Arg	Asn	Gly	Val	Asn	Phe	Ser	35	40	45	
Leu	Ala	Val	Val	Val	Ile	Tyr	Leu	Ile	Leu	Leu	Thr	Ala	Gly	Ala	50	55	60	
Gly	Leu	Leu	Val	Val	Gln	Val	Leu	Asn	Leu	Gln	Ala	Arg	Leu	Arg	65	70	75	
Val	Leu	Glu	Met	Tyr	Phe	Leu	Asn	Asp	Thr	Leu	Ala	Ala	Glu	Asp	80	85	90	
Ser	Pro	Ser	Phe	Ser	Leu	Leu	Gln	Ser	Ala	His	Pro	Gly	Glu	His	95	100	105	
Leu	Ala	Gln	Gly	Ala	Ser	Arg	Leu	Gln	Val	Leu	Gln	Ala	Gln	Leu	110	115	120	
Thr	Trp	Val	Arg	Val	Ser	His	Glu	His	Leu	Leu	Gln	Arg	Val	Asp	125	130	135	
Asn	Phe	Thr	Gln	Asn	Pro	Gly	Met	Phe	Arg	Ile	Lys	Gly	Glu	Gln	140	145	150	
Gly	Ala	Pro	Gly	Leu	Gln	Gly	His	Lys	Gly	Ala	Met	Gly	Met	Pro	155	160	165	
Gly	Ala	Pro	Gly	Pro	Pro	Gly	Pro	Pro	Ala	Glu	Lys	Gly	Ala	Lys	170	175	180	
Gly	Ala	Met	Gly	Arg	Asp	Gly	Ala	Thr	Gly	Pro	Ser	Gly	Pro	Gln				



185										190					195				
Gly	Pro	Pro	Gly	Val	Lys	Gly	Glu	Ala	Gly	Leu	Gln	Gly	Pro	Gln					
				200					205					210					
Gly	Ala	Pro	Gly	Lys	Gln	Gly	Ala	Thr	Gly	Thr	Pro	Gly	Pro	Gln					
				215					220					225					
Gly	Glu	Lys	Gly	Ser	Lys	Gly	Asp	Gly	Gly	Leu	Ile	Gly	Pro	Lys					
				230					235					240					
Gly	Glu	Thr	Gly	Thr	Lys	Gly	Glu	Lys	Gly	Asp	Leu	Gly	Leu	Pro					
				245					250					255					
Gly	Ser	Lys	Gly	Asp	Arg	Gly	Met	Lys	Gly	Asp	Ala	Gly	Val	Met					
				260					265					270					
Gly	Pro	Pro	Gly	Ala	Gln	Gly	Ser	Lys	Gly	Asp	Phe	Gly	Arg	Pro					
				275					280					285					
Gly	Pro	Pro	Gly	Leu	Ala	Gly	Phe	Pro	Gly	Ala	Lys	Gly	Asp	Gln					
				290					295					300					
Gly	Gln	Pro	Gly	Leu	Gln	Gly	Val	Pro	Gly	Pro	Pro	Gly	Ala	Val					
				305					310					315					
Gly	His	Pro	Gly	Ala	Lys	Gly	Glu	Pro	Gly	Ser	Ala	Gly	Ser	Pro					
				320					325					330					
Gly	Arg	Ala	Gly	Leu	Pro	Gly	Ser	Pro	Gly	Ser	Pro	Gly	Ala	Thr					
				335					340					345					
Gly	Leu	Lys	Gly	Ser	Lys	Gly	Asp	Thr	Gly	Leu	Gln	Gly	Gln	Gln					
				350					355					360					
Gly	Arg	Lys	Gly	Glu	Ser	Gly	Val	Pro	Gly	Pro	Ala	Gly	Val	Lys					
				365					370					375					
Gly	Glu	Gln	Gly	Ser	Pro	Gly	Leu	Ala	Gly	Pro	Lys	Gly	Ala	Pro					
				380					385					390					
Gly	Gln	Ala	Gly	Gln	Lys	Gly	Asp	Gln	Gly	Val	Lys	Gly	Ser	Ser					
				395					400					405					
Gly	Glu	Gln	Gly	Val	Lys	Gly	Glu	Lys	Gly	Glu	Arg	Gly	Glu	Asn					
				410					415					420					
Ser	Val	Ser	Val	Arg	Ile	Val	Gly	Ser	Ser	Asn	Arg	Gly	Arg	Ala					
				425					430					435					
Glu	Val	Tyr	Tyr	Ser	Gly	Thr	Trp	Gly	Thr	Ile	Cys	Asp	Asp	Glu					
				440					445					450					
Trp	Gln	Asn	Ser	Asp	Ala	Ile	Val	Phe	Cys	Arg	Met	Leu	Gly	Tyr					
				455					460					465					
Ser	Lys	Gly	Arg	Ala	Leu	Tyr	Lys	Val	Gly	Ala	Gly	Thr	Gly	Gln					

	470		475		480
Ile Trp Leu Asp Asn Val Gln Cys Arg Gly Thr Glu Ser Thr Leu					
	485		490		495
Trp Ser Cys Thr Lys Asn Ser Trp Gly His His Asp Cys Ser His					
	500		505		510
Glu Glu Asp Ala Gly Val Glu Cys Ser Val					
	515		520		

<210> 615  
 <211> 647  
 <212> DNA  
 <213> Homo Sapien

<400> 615  
 cccacgcgctc cgaaggcaga caaaggttca tttgtaaaga agtccttcc 50  
 agcacctcct ctcttctcct tttgccaaa ctcaccagtg gagtgtgagc 100  
 atttaagaag catcctctgc caagaccaa aggaaagaag aaaaagggcc 150  
 aaaagccaaa atgaaactga tggtaactgt tttcaccatt gggctaactt 200  
 tgctgctagg agttcaagcc atgcctgcaa atcgctctc ttgctacaga 250  
 aagatactaa aagatcaca ctgtcacac cttccggaag gagtagctga 300  
 cctgacacag attgatgtca atgtccagga tcatttctgg gatgggaagg 350  
 gatgtgagat gatctgttac tgcaacttca gcgaattgct ctgctgcca 400  
 aaagacgttt tctttggacc aaagatctct ttcgtgattc cttgcaaca 450  
 tcaatgagaa tcttcatgta ttctggagaa caccattcct gatttcccac 500  
 aaactgcact acatcagtat aactgcattt ctagtttcta tatagtgcaa 550  
 tagagcatag attctataaa ttcttacttg tctaagacaa gtaaatctgt 600  
 gttaaacaag tagtaataaa agttaattca atctaaaaa aaaaaaa 647

<210> 616  
 <211> 98  
 <212> PRT  
 <213> Homo Sapien

<400> 616  
 Met Lys Leu Met Val Leu Val Phe Thr Ile Gly Leu Thr Leu Leu  
 1 5 10 15  
 Leu Gly Val Gln Ala Met Pro Ala Asn Arg Leu Ser Cys Tyr Arg  
 20 25 30  
 Lys Ile Leu Lys Asp His Asn Cys His Asn Leu Pro Glu Gly Val  
 35 40 45

Ala	Asp	Leu	Thr	Gln	Ile	Asp	Val	Asn	Val	Gln	Asp	His	Phe	Trp
				50					55					60
Asp	Gly	Lys	Gly	Cys	Glu	Met	Ile	Cys	Tyr	Cys	Asn	Phe	Ser	Glu
				65					70					75
Leu	Leu	Cys	Cys	Pro	Lys	Asp	Val	Phe	Phe	Gly	Pro	Lys	Ile	Ser
				80					85					90
Phe	Val	Ile	Pro	Cys	Asn	Asn	Gln							
				95										

<210> 617  
 <211> 2558  
 <212> DNA  
 <213> Homo Sapien

<400> 617  
 ccacgcgctc cgccgacgcg tgggctggac ccaggtctg gagcgaattc 50  
 cagcctgcag ggctgataag cgaggcatta gtgagattga gagagacttt 100  
 accccgccgt ggtggttga ggcgcgcag tagagcagca gcacaggcgc 150  
 gggccccggg aggcggctc tgctcgcgc gagatgtgga atctccttca 200  
 cgaaaccgac tcggctgtgg ccaccgcgc cgcgccgcg tggctgtgcg 250  
 ctggggcgct ggtgctggcg ggtggttct ttctcctcg cttcctcttc 300  
 ggggtggtta taaaatctc caatgaagct actaacatta ctccaaagca 350  
 taatatgaaa gcatttttg atgaattgaa agctgagaac atcaagaagt 400  
 tcttacataa ttttacacag ataccacatt tagcaggaac agaacaaaac 450  
 tttcagcttg caaagcaa atcaatcccag tggaaagaat ttggcctgga 500  
 ttctgttgag ctagctcatt atgatgtcct gttgtcctac ccaaataaga 550  
 ctcatcccaa ctacatctca ataattaatg aagatggaaa tgagattttc 600  
 aacacatcat tatttgaacc acctcctcca ggatatgaaa atgtttcgga 650  
 tattgtacca cctttcagtg ctttctctcc tcaaggaatg ccagagggcg 700  
 atctagtgtg tgtaactat gcacgaactg aagacttctt taaattggaa 750  
 cgggacatga aaatcaattg ctctgggaaa attgtaattg ccagatatgg 800  
 gaaagttttc agaggaaata aggttaaaaa tgcccagctg gcaggggcca 850  
 aaggagtcat tctctactcc gaccctgctg actactttgc tcctgggggtg 900  
 aagtcctatc cagacggttg gaatcttct ggaggtggtg tccagcgtgg 950

aaatatccta aatctgaatg gtgcaggaga ccctctcaca ccaggttacc 1000  
cagcaaatga atatgcttat aggcgtggaa ttgcagaggc tggttggtctt 1050  
ccaagtattc ctgttcatcc aattggatac tatgatgcac agaagctcct 1100  
agaaaaaatg ggtggctcag caccaccaga tagcagctgg agaggaagtc 1150  
tcaaagtgcc ctacaatgtt ggacctggct ttactggaaa cttttctaca 1200  
caaaaagtca agatgcacat ccactctacc aatgaagtga cgagaattta 1250  
caatgtgata ggtactctca gaggagcagt ggaaccagac agatatgtca 1300  
ttctgggagg tcaccgggac tcatgggtgt ttggtggtat tgacctcag 1350  
agtggagcag ctgttggttca tgaaattgtg aggagctttg gaacactgaa 1400  
aaaggaaggg tggagaccta gaagaacaat tttgtttgca agctgggatg 1450  
cagaagaatt tggctcttctt ggttctactg agtgggcaga ggagaattca 1500  
agactccttc aagagcgtgg cgtggcttat attaagtctg actcatctat 1550  
agaaggaaac tacactctga gagttgattg tacaccgctg atgtacagct 1600  
tggtacacaa cctaacaaaa gagctgaaaa gcctgatga aggctttgaa 1650  
ggcaaatctc tttatgaaag ttggactaaa aaaagtcctt cccagagtt 1700  
cagtggcatg cccaggataa gcaaatggg atctggaaat gattttgagg 1750  
tgttcttcca acgacttga attgcttcag gcagagcacg gtatactaaa 1800  
aattgggaaa caaacaatt cagcggctat ccactgtatc acagtgtcta 1850  
tgaaacatat gagttggtgg aaaagtttta tgatccaatg tttaaatata 1900  
acctcactgt ggcccagggt cgaggaggga tgggtgttga gctagccaat 1950  
tccatagtgc tcccttttga ttgtcgagat tatgctgtag ttttaagaaa 2000  
gtatgctgac aaaatctaca gtatttctat gaaacatcca caggaaatga 2050  
agacatacag tgtatcattt gattcacttt tttctgcagt aaagaatttt 2100  
acagaaattg cttccaagtt cagtggagga ctccaggact ttgacaaaag 2150  
caaccaata gtattaagaa tgatgaatga tcaactcatg tttctggaaa 2200  
gagcatttat tgatccatta gggttaccag acaggccttt ttataggcat 2250  
gtcatctatg ctccaagcag ccacaacaag tatgcagggg agtcattccc 2300  
aggaatttat gatgctctgt ttgatattga aagcaaagt gacccttcca 2350  
aggcctgggg agaagtgaag agacagattt atgttgcagc cttcacagt 2400

caggcagctg cagagacttt gagtgaagta gcctaagagg attttttaga 2450  
 gaatccgtat tgaatttggtg tggtatgtca ctcagaaaga atcgtaatgg 2500  
 gtatatgtat aaattttaaa attggtatat ttgaaataaa gttgaatatt 2550  
 atatataa 2558

<210> 618  
 <211> 750  
 <212> PRT  
 <213> Homo Sapien

<400> 618  
 Met Trp Asn Leu Leu His Glu Thr Asp Ser Ala Val Ala Thr Ala  
 1 5 10 15  
 Arg Arg Pro Arg Trp Leu Cys Ala Gly Ala Leu Val Leu Ala Gly  
 20 25 30  
 Gly Phe Phe Leu Leu Gly Phe Leu Phe Gly Trp Phe Ile Lys Ser  
 35 40 45  
 Ser Asn Glu Ala Thr Asn Ile Thr Pro Lys His Asn Met Lys Ala  
 50 55 60  
 Phe Leu Asp Glu Leu Lys Ala Glu Asn Ile Lys Lys Phe Leu His  
 65 70 75  
 Asn Phe Thr Gln Ile Pro His Leu Ala Gly Thr Glu Gln Asn Phe  
 80 85 90  
 Gln Leu Ala Lys Gln Ile Gln Ser Gln Trp Lys Glu Phe Gly Leu  
 95 100 105  
 Asp Ser Val Glu Leu Ala His Tyr Asp Val Leu Leu Ser Tyr Pro  
 110 115 120  
 Asn Lys Thr His Pro Asn Tyr Ile Ser Ile Ile Asn Glu Asp Gly  
 125 130 135  
 Asn Glu Ile Phe Asn Thr Ser Leu Phe Glu Pro Pro Pro Pro Gly  
 140 145 150  
 Tyr Glu Asn Val Ser Asp Ile Val Pro Pro Phe Ser Ala Phe Ser  
 155 160 165  
 Pro Gln Gly Met Pro Glu Gly Asp Leu Val Tyr Val Asn Tyr Ala  
 170 175 180  
 Arg Thr Glu Asp Phe Phe Lys Leu Glu Arg Asp Met Lys Ile Asn  
 185 190 195  
 Cys Ser Gly Lys Ile Val Ile Ala Arg Tyr Gly Lys Val Phe Arg  
 200 205 210

Gly Asn Lys Val	Lys Asn Ala Gln Leu	Ala Gly Ala Lys Gly Val	215	220	225
Ile Leu Tyr Ser	Asp Pro Ala Asp Tyr	Phe Ala Pro Gly Val Lys	230	235	240
Ser Tyr Pro Asp	Gly Trp Asn Leu Pro	Gly Gly Gly Val Gln Arg	245	250	255
Gly Asn Ile Leu	Asn Leu Asn Gly Ala	Gly Asp Pro Leu Thr Pro	260	265	270
Gly Tyr Pro Ala	Asn Glu Tyr Ala Tyr	Arg Arg Gly Ile Ala Glu	275	280	285
Ala Val Gly Leu	Pro Ser Ile Pro Val	His Pro Ile Gly Tyr Tyr	290	295	300
Asp Ala Gln Lys	Leu Leu Glu Lys Met	Gly Gly Ser Ala Pro Pro	305	310	315
Asp Ser Ser Trp	Arg Gly Ser Leu Lys	Val Pro Tyr Asn Val Gly	320	325	330
Pro Gly Phe Thr	Gly Asn Phe Ser Thr	Gln Lys Val Lys Met His	335	340	345
Ile His Ser Thr	Asn Glu Val Thr Arg	Ile Tyr Asn Val Ile Gly	350	355	360
Thr Leu Arg Gly	Ala Val Glu Pro Asp	Arg Tyr Val Ile Leu Gly	365	370	375
Gly His Arg Asp	Ser Trp Val Phe Gly	Gly Ile Asp Pro Gln Ser	380	385	390
Gly Ala Ala Val	Val His Glu Ile Val	Arg Ser Phe Gly Thr Leu	395	400	405
Lys Lys Glu Gly	Trp Arg Pro Arg Arg	Thr Ile Leu Phe Ala Ser	410	415	420
Trp Asp Ala Glu	Glu Phe Gly Leu Leu	Gly Ser Thr Glu Trp Ala	425	430	435
Glu Glu Asn Ser	Arg Leu Leu Gln Glu	Arg Gly Val Ala Tyr Ile	440	445	450
Asn Ala Asp Ser	Ser Ile Glu Gly Asn	Tyr Thr Leu Arg Val Asp	455	460	465
Cys Thr Pro Leu	Met Tyr Ser Leu Val	His Asn Leu Thr Lys Glu	470	475	480
Leu Lys Ser Pro	Asp Glu Gly Phe Glu	Gly Lys Ser Leu Tyr Glu	485	490	495

Ser Trp Thr Lys	Lys Ser Pro Ser Pro	Glu Phe Ser Gly Met	Pro
	500	505	510
Arg Ile Ser Lys	Leu Gly Ser Gly Asn	Asp Phe Glu Val Phe	Phe
	515	520	525
Gln Arg Leu Gly	Ile Ala Ser Gly Arg	Ala Arg Tyr Thr Lys	Asn
	530	535	540
Trp Glu Thr Asn	Lys Phe Ser Gly Tyr	Pro Leu Tyr His Ser	Val
	545	550	555
Tyr Glu Thr Tyr	Glu Leu Val Glu Lys	Phe Tyr Asp Pro Met	Phe
	560	565	570
Lys Tyr His Leu	Thr Val Ala Gln Val	Arg Gly Gly Met Val	Phe
	575	580	585
Glu Leu Ala Asn	Ser Ile Val Leu Pro	Phe Asp Cys Arg Asp	Tyr
	590	595	600
Ala Val Val Leu	Arg Lys Tyr Ala Asp	Lys Ile Tyr Ser Ile	Ser
	605	610	615
Met Lys His Pro	Gln Glu Met Lys Thr	Tyr Ser Val Ser Phe	Asp
	620	625	630
Ser Leu Phe Ser	Ala Val Lys Asn Phe	Thr Glu Ile Ala Ser	Lys
	635	640	645
Phe Ser Glu Arg	Leu Gln Asp Phe Asp	Lys Ser Asn Pro Ile	Val
	650	655	660
Leu Arg Met Met	Asn Asp Gln Leu Met	Phe Leu Glu Arg Ala	Phe
	665	670	675
Ile Asp Pro Leu	Gly Leu Pro Asp Arg	Pro Phe Tyr Arg His	Val
	680	685	690
Ile Tyr Ala Pro	Ser Ser His Asn Lys	Tyr Ala Gly Glu Ser	Phe
	695	700	705
Pro Gly Ile Tyr	Asp Ala Leu Phe Asp	Ile Glu Ser Lys Val	Asp
	710	715	720
Pro Ser Lys Ala	Trp Gly Glu Val Lys	Arg Gln Ile Tyr Val	Ala
	725	730	735
Ala Phe Thr Val	Gln Ala Ala Ala Glu	Thr Leu Ser Glu Val	Ala
	740	745	750

<210> 619

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 619

agatgtgaag gtgcaggtgt gccg 24

<210> 620

<211> 25

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 620

gaacatcagc gctcccggtg attcc 25

<210> 621

<211> 46

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 621

ccagcctttg aatggtacaa aggagagaag aagctcttca atggcc 46

<210> 622

<211> 25

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 622

ccaaactcac ccagtgagtg tgagc 25

<210> 623

<211> 25

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 623

tgggaaatca ggaatggtgt tctcc 25

<210> 624

<211> 50

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic Oligonucleotide probe



**BEST AVAILABLE COPY**

<400> 624

cttgttttca ccattgggct aactttgctg ctaggagttc aagccatgcc 50